

RHODE ISLAND STANDARD DETAILS INDEX

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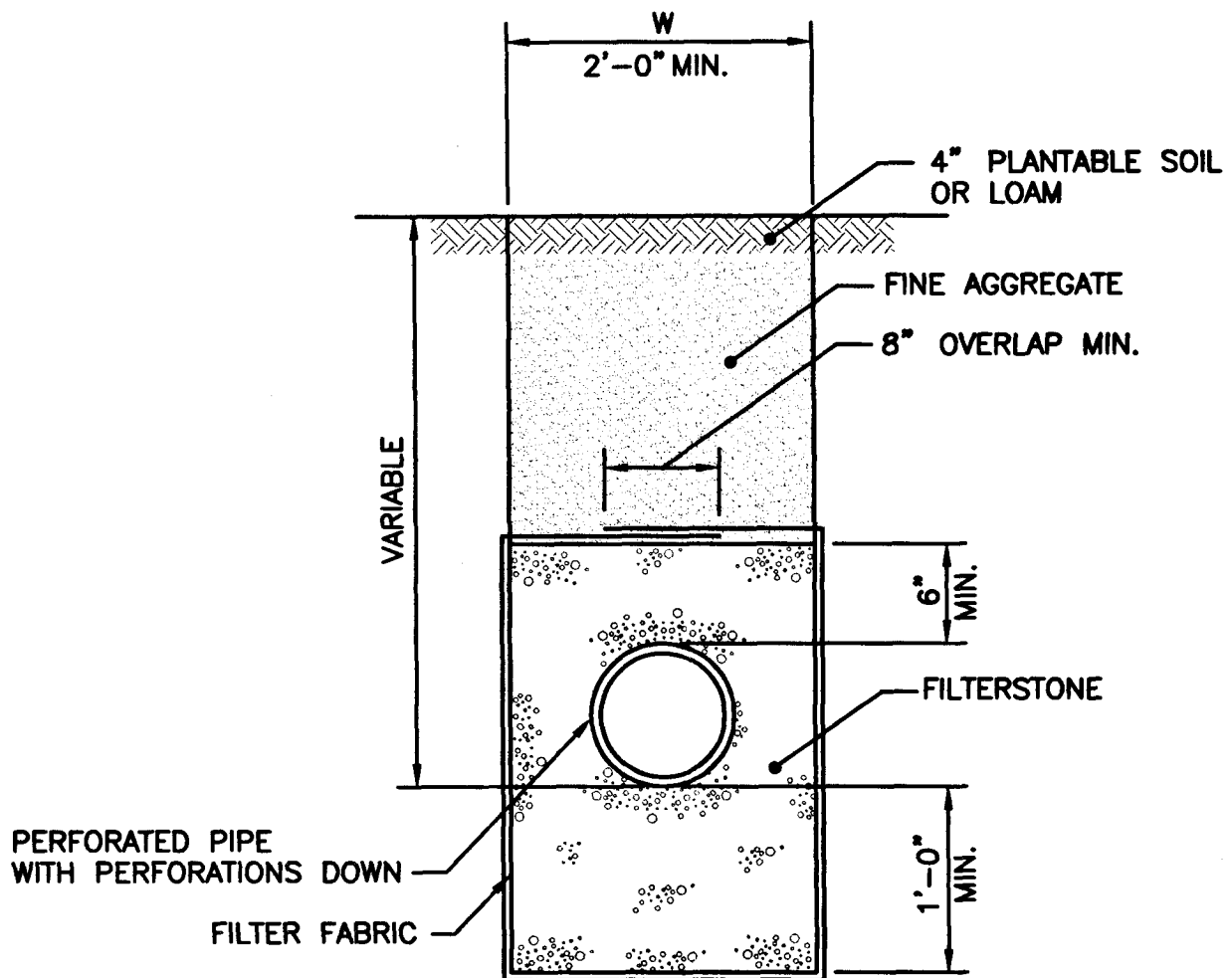
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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. WIDTH (W) OF TRENCH = INSIDE DIAMETER OF PIPE + 1'-0" OR 2'-0" WHICH EVER IS GREATER.
3. MINIMUM PIPE DIAMETER 8".
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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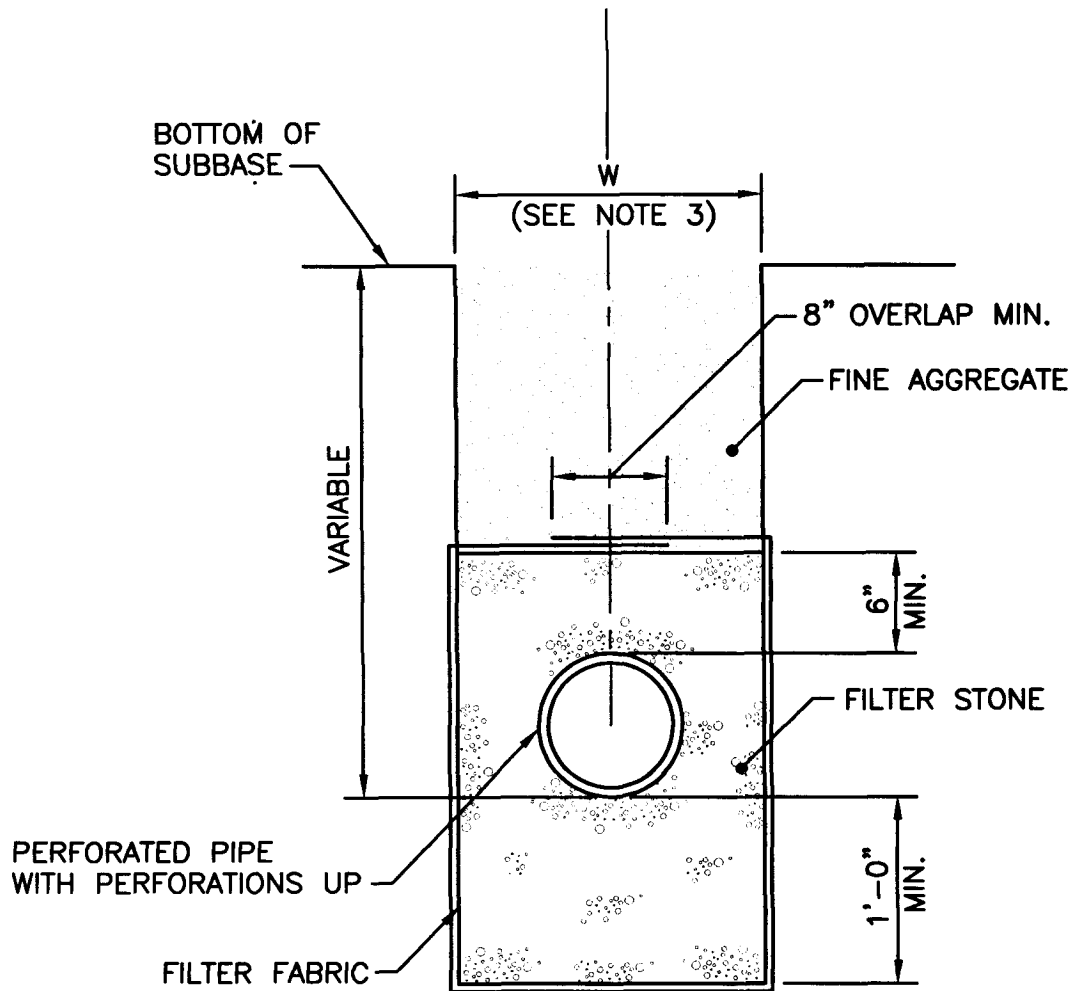
UNDERDRAIN

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Edward J. Parker Jr.
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TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM PIPE DIAMETER 1'-0".
3. TRENCH WIDTHS: PIPE \leq 36" = O.D. + 24" EACH SIDE
PIPE > 36" = O.D. + 30" EACH SIDE
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.
5. SEE CONSTRUCTION PLANS FOR LOCATION.

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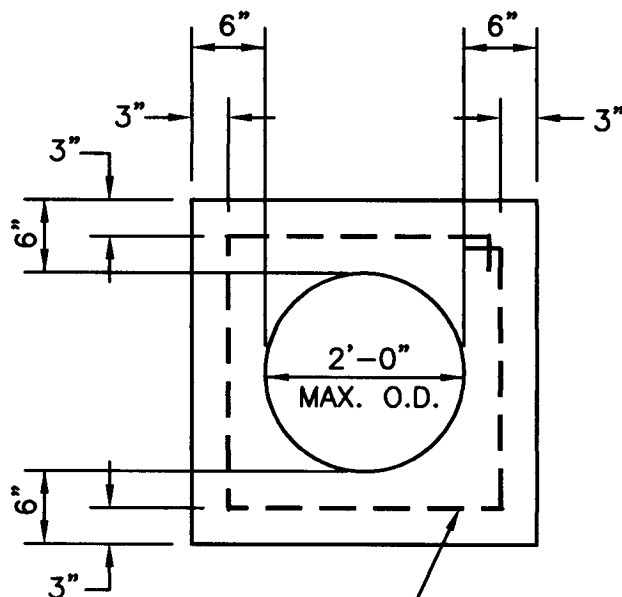
COMBINATION DRAIN

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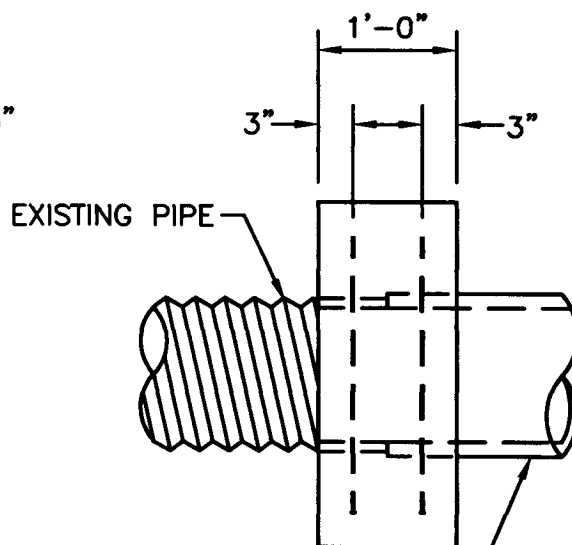
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JUNE 15, 1998
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(1)-#4 EPOXY
COATED REBAR, E.F.



CONCRETE, STEEL, CLAY
OR CAST IRON PIPE

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. MAXIMUM PIPE DIAMETER FOR USE OF CONNECTING COLLAR IS 2'-0".
3. PIPE WITH LARGEST OUTSIDE DIAMETER USED TO DETERMINE SIZE OF COLLAR.

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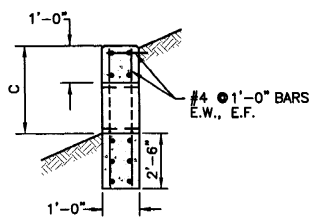
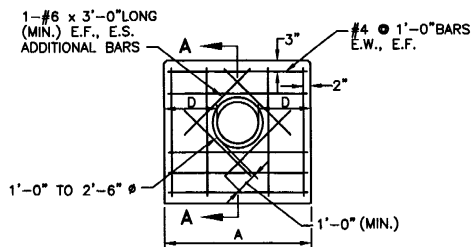
CONCRETE CONNECTING COLLAR

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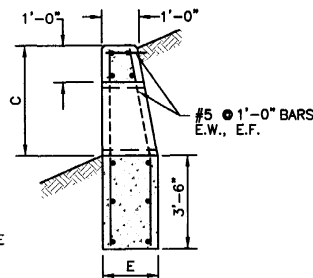
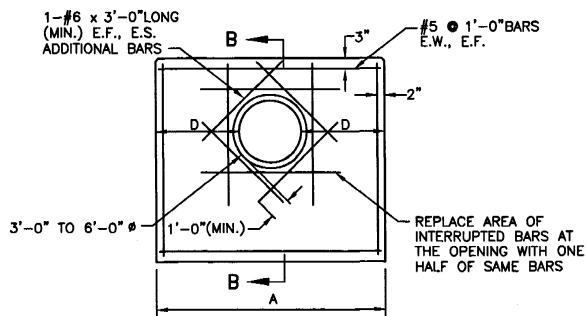
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SECTION A-A



SECTION B-B

DIAMETER OF PIPE	A	C	D	E	CU. FT. CONCRETE
1'-0"	3'-0"	2'-2"	1'-0"	-	13.2
1'-3"	3'-9"	2'-5"	1'-3"	-	17.2
1'-6"	4'-6"	2'-8"	1'-6"	-	21.5
1'-9"	5'-3"	2'-11"	1'-9"	-	26.0
2'-0"	6'-0"	3'-2"	2'-0"	-	30.9
2'-3"	6'-9"	3'-6"	2'-3"	-	36.5
2'-6"	7'-6"	3'-9"	2'-6"	-	42.0
3'-0"	9'-6"	4'-0"	3'-3"	1'-5"	84.1
3'-6"	11'-0"	4'-6"	3'-9"	1'-7"	111.8
4'-0"	12'-8"	5'-0"	4'-4"	1'-9"	146.5
4'-6"	14'-4"	5'-6"	4'-11"	1'-11"	186.3
5'-0"	16'-0"	6'-0"	5'-6"	2'-1"	232.6
5'-6"	17'-8"	6'-6"	6'-1"	2'-3"	284.9
6'-0"	19'-4"	7'-0"	6'-8"	2'-5"	343.6

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. 3/4" CHAMFER ON ALL EXPOSED EDGES.
3. 1'-0" COMPACTED GRAVEL UNDER HEADWALL.
4. ALL REINFORCING BARS SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE HEADWALLS FOR PIPE CULVERTS

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DEPARTMENT OF TRANSPORTATION

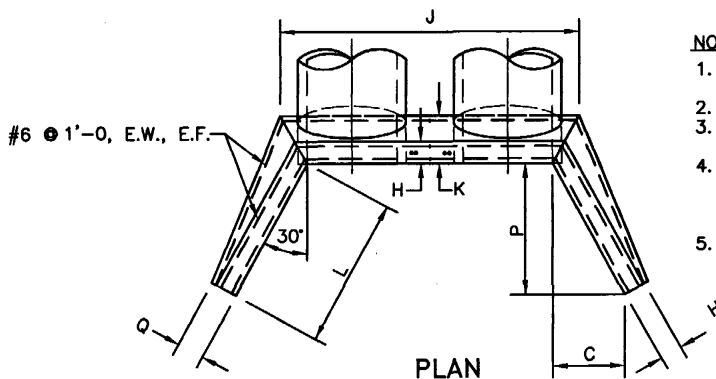
R.I.
STANDARD
2.1.0

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RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS		
CHIEF ENGINEER <i>James J. Caputo</i> TRANSPORTATION CHIEF DESIGN ENGINEER <i>Edward J. Kelly</i> TRANSPORTATION JUNE 15, 1998 ISSUE DATE		
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SHEET 2 OF 2

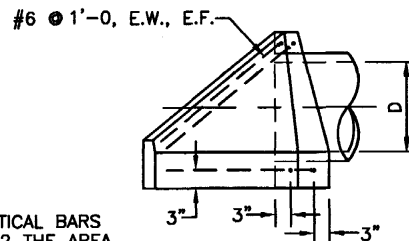
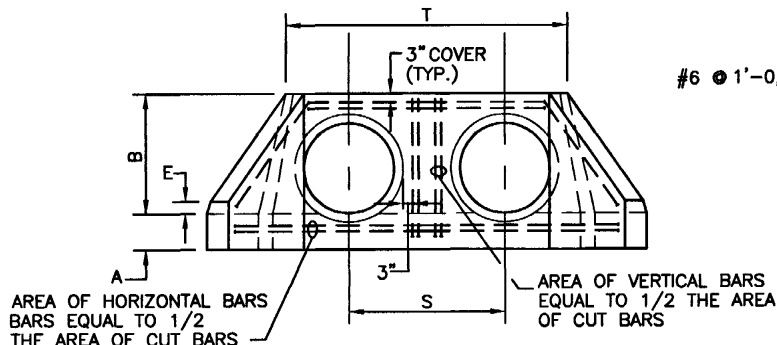
TABLE OF DIMENSIONS AND CONCRETE VOLUMES PER HEADWALL FOR 3'-6" TO 7'-0" CIRCULAR PIPE CULVERTS									
		DIAMETER OF PIPE CULVERTS							
		3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
FOR 1 1/2:1 FILL SLOPE	A	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"
	B	4'-4"	4'-10"	5'-4"	5'-10"	6'-4"	6'-10"	7'-4"	7'-10"
	C	3'-3 3/4"	3'-9"	4'-2 1/4"	4'-7"	5'-0 5/8"	5'-5 3/4"	5'-11"	6'-4 1/4"
	D	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
	E	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"
	H	0'-10"	0'-10"	0'-11"	1'-0"	1'-1"	1'-2"	1'-3"	1'-4"
	J	11'-8 1/2"	13'-2 1/4"	14'-9 1/4"	16'-4"	17'-11"	19'-6"	21'-0 3/4"	22'-7 5/8"
	K	1'-11"	2'-0 1/2"	2'-3"	2'-5 1/2"	2'-8"	2'-10 1/2"	3'-1"	3'-3 1/2"
	L	6'-7 5/8"	7'-6"	8'-4 1/2"	9'-2 7/8"	10'-1 1/4"	10'-11 5/8"	11'-10"	12'-8 3/8"
	P	5'-9"	6'-6"	7'-3"	8'-0"	8'-9"	9'-6"	10'-3"	11'-0"
	Q	0'-11 1/2"	0'-11 1/2"	1'-0 1/2"	1'-1 1/2"	1'-2 1/2"	1'-3 1/2"	1'-4 1/2"	1'-5 1/2"
CU. YD. CONC.	CONC. PIPE	3.6	4.4	5.7	7.1	8.8	10.8	12.9	15.4
	C.M. PIPE	3.8	4.7	6.1	7.7	9.5	11.7	14.4	16.7
FOR 2:1 FILL SLOPE	C	4'-4"	4'-10 7/8"	5'-5 3/4"	6'-0 3/4"	6'-7 5/8"	7'-2 5/8"	7'-9 1/2"	8'-4 1/2"
	J	11'-8 1/4"	13'-2"	14'-9"	16'-3 3/4"	17'-10 3/4"	19'-5 1/2"	21'-0 1/2"	22'-7 1/8"
	L	8'-0"	9'-9 3/4"	10'-11 5/8"	12'-1 1/2"	13'-3 3/8"	14'-5 1/4"	15'-7"	16'-9"
	P	7'-6"	8'-6"	9'-6"	10'-6"	11'-6"	12'-6"	13'-6"	14'-6"
CU. YD. CONC.	CONC. PIPE	4.3	5.3	6.8	8.6	10.7	13.0	15.7	18.7
	C.M. PIPE	4.5	5.6	7.2	9.1	11.4	13.9	16.8	20.0

NOTE:
FOR ALL DIMENSIONS NOT SHOWN, SEE VALUES LISTED ABOVE FOR 1 1/2:1 FILL SLOPE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS.
2. QUANTITIES GIVEN ARE FOR ONE ENDWALL.
3. FOR DIMENSIONS NOT GIVEN IN TABLE, SEE SHEET 2 OF 2.
4. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1'-0" OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
5. ALL REINFORCING BARS SHALL BE EPOXY COATED.



END ELEVATION

SIDE ELEVATION

FOR CORRUGATED METAL PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	5'-3 1/2"	8'-9 1/2"	5.1	1.3	5.8	1.3
4'-0"	6'-0 1/2"	10'-0 1/2"	6.3	1.7	7.2	1.4
4'-6"	6'-9 1/2"	11'-3 1/2"	8.3	2.1	8.4	2.1
5'-0"	7'-6 1/2"	12'-6 1/2"	10.4	2.7	11.8	2.4
5'-6"	8'-3 1/2"	13'-9 1/2"	12.8	3.3	14.6	3.9
6'-0"	9'-0 1/2"	16'-0 1/2"	16.7	4.1	17.9	4.1
6'-6"	9'-9 1/2"	16'-3 1/2"	19.0	5.0	21.7	4.9
7'-0"	10'-6 1/2"	17'-6 1/2"	22.8	6.0	26.0	5.1

FOR CONCRETE PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	6'-0"	9'-6"	4.1	1.3	5.5	1.3
4'-0"	6'-10"	10'-10"	6.0	1.6	6.9	1.6
4'-6"	7'-0"	12'-2"	7.7	2.1	8.8	2.1
5'-0"	8'-6"	13'-6"	9.7	2.6	11.2	2.6
5'-6"	9'-4"	14'-10"	12.1	3.3	13.9	3.3
6'-0"	10'-2"	16'-2"	14.7	4.0	16.9	4.0
6'-6"	11'-0"	17'-6"	17.7	4.8	20.4	4.8
7'-0"	11'-10"	18'-10"	21.2	5.7	24.4	5.7

SHEET 1 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**STANDARD HEADWALLS FOR MULTIPLE
3'-6" TO 7'-0" PIPE CULVERTS**

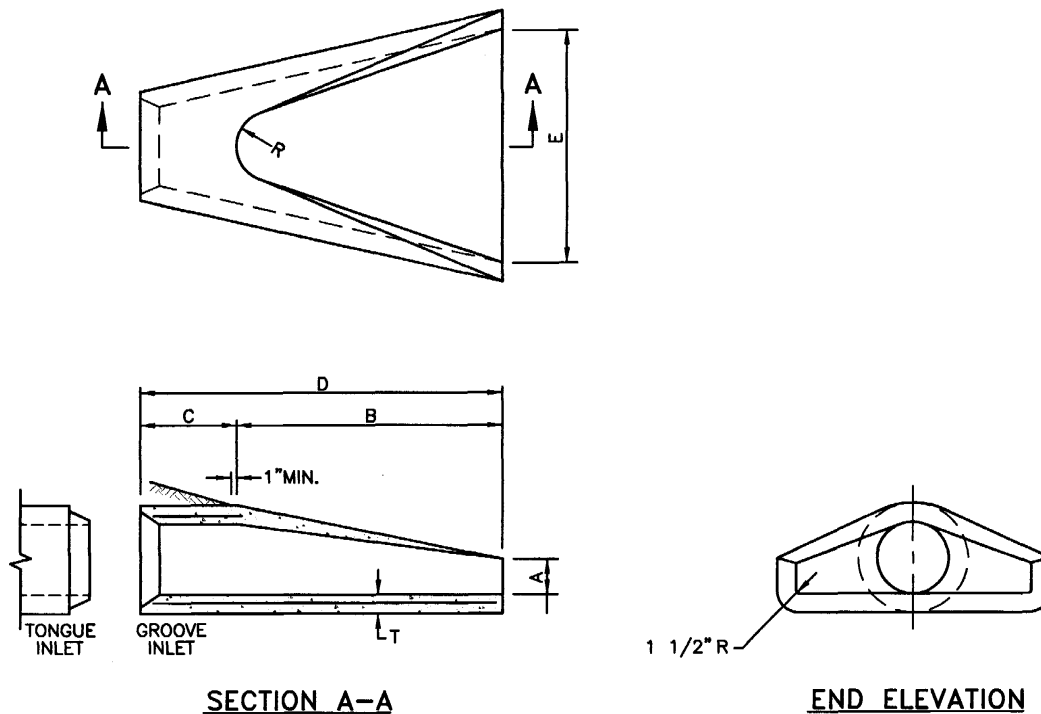
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James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Palka
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





DIMENSIONS								REINFORCEMENT
DIA.	A	B	C	D	E	R	T	ONE LAYER REINFORCEMENT IN CENTER OF WALL
								MIN. AREA OF EACH WAY (SQ. IN./FT.)
1'-0"	4"	2'-0"	4'-0 7/8"	6'-0 7/8"	2'-0"	9"	2"	0.048
1'-3"	6"	2'-3"	3'-10"	6'-1"	2'-6"	11"	2 1/4"	0.054
1'-6"	9"	2'-3"	3'-10"	6'-1"	3'-0"	12"	2 1/2"	0.060
2'-0"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	1'-2"	3"	0.072
2'-6"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	1'-3"	3 1/2"	0.084
3'-0"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	1'-8"	4"	0.096
3'-6"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	1'-10"	4 1/2"	0.108
4'-0"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	1'-10"	5"	0.120
4'-6"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	2'-0"	5 1/2"	0.132
5'-0"	2'-6"	5'-0"	3'-3"	8'-3"	8'-0"	2'-0"	6"	0.144

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 701 OF THE R.I. STANDARD SPECIFICATIONS.

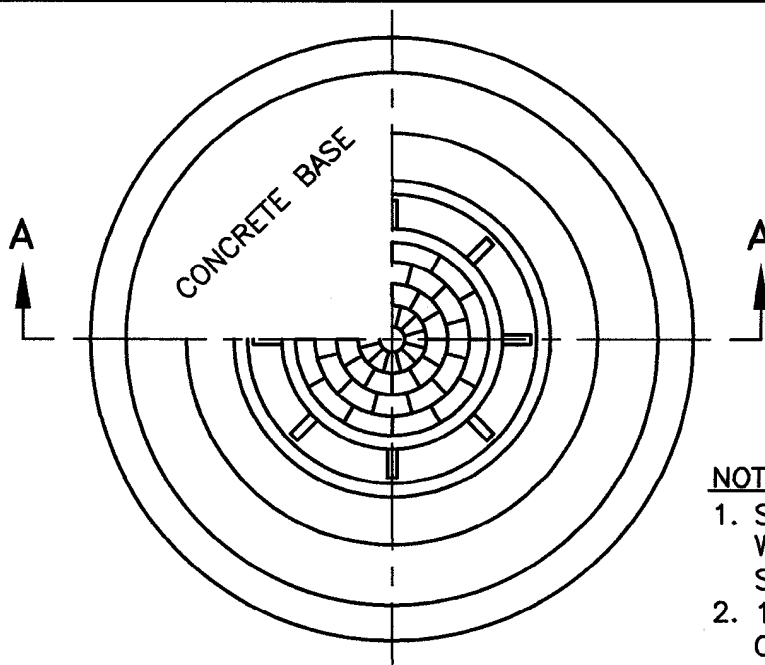
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PRECAST CONCRETE FLARED END SECTION		R.I. STANDARD 2.3.0
NO.	BY	DATE			

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

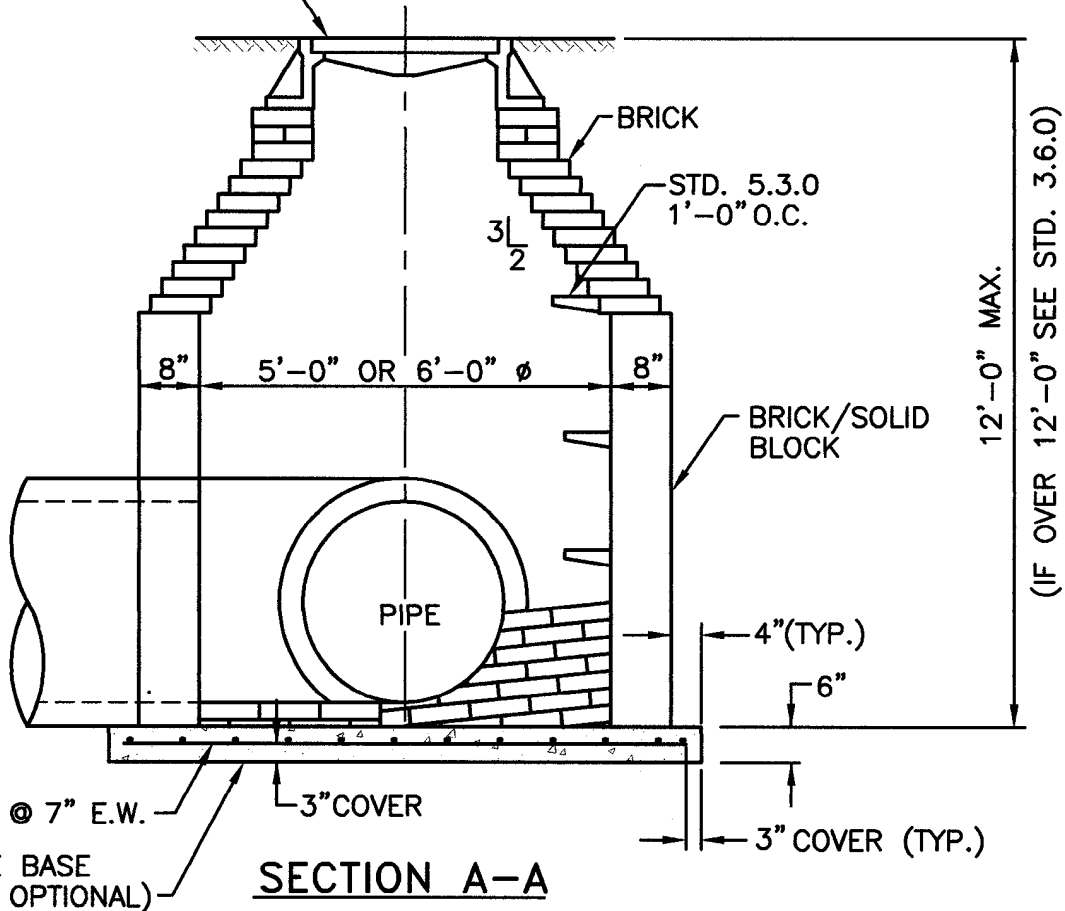


PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

FRAME AND COVER



SECTION A-A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

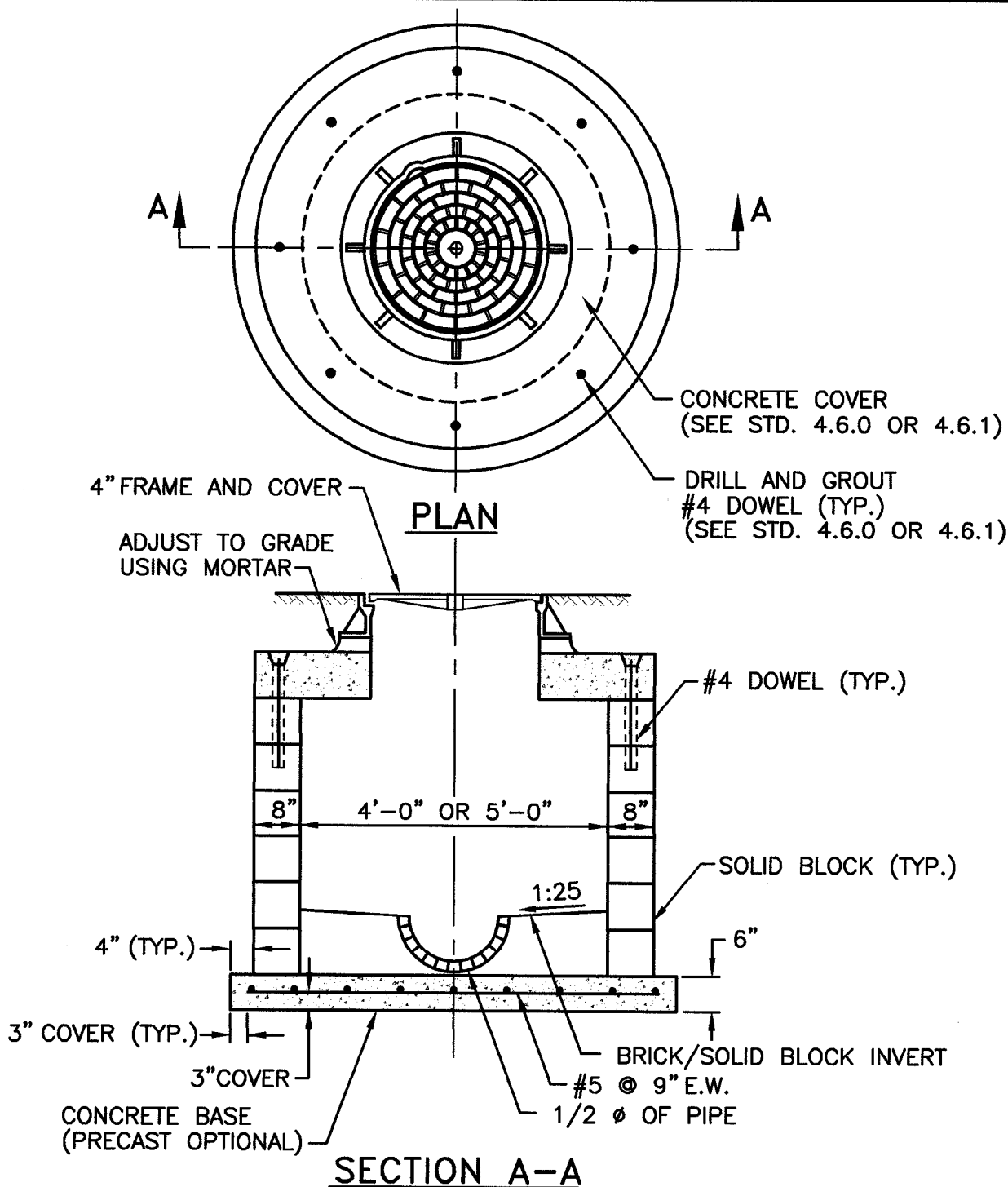
**BRICK/SOLID BLOCK
5'-0" OR 6'-0" ROUND MANHOLE**

James H. Casabelli
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
5. ALL PIPES SHALL BE SEALED TO MANHOLE ON INSIDE AND OUTSIDE SURFACES.
6. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

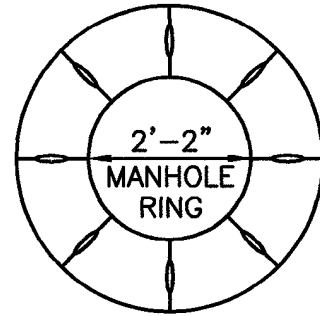
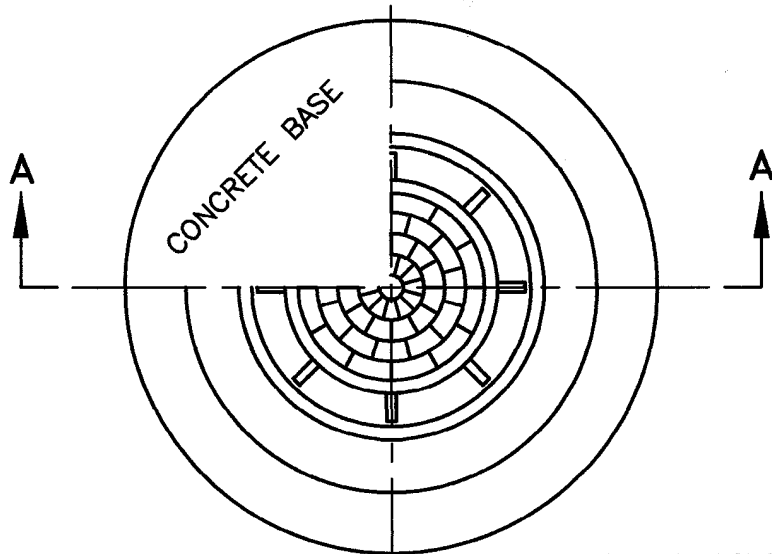
**SOLID BLOCK SHALLOW
4'-0" OR 5'-0" ROUND MANHOLE**

James R. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund D. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

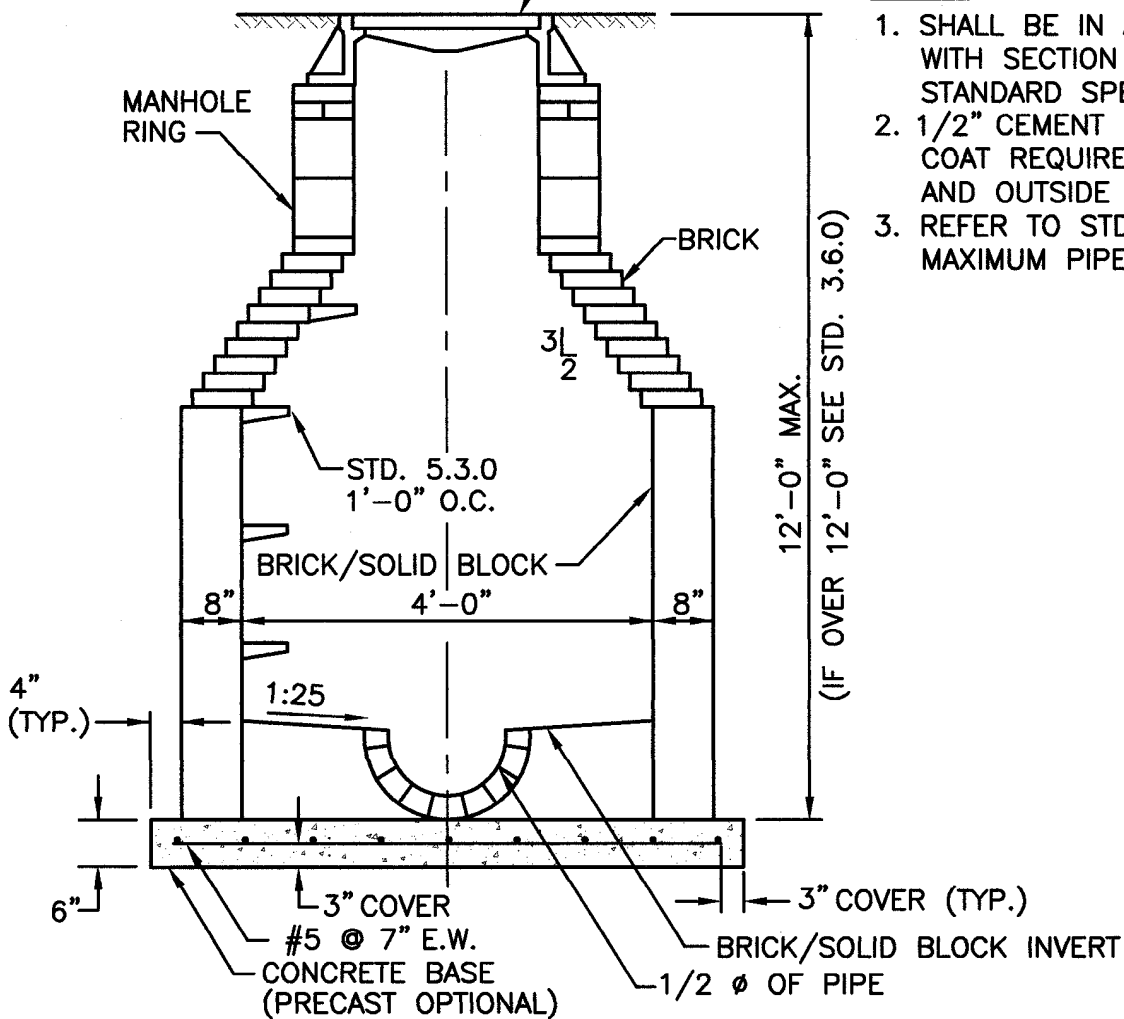
R.I.
STANDARD
3.2.2



PLAN FRAME AND COVER

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.



SECTION A-A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BRICK/SOLID BLOCK
4'-0" ROUND MANHOLE**

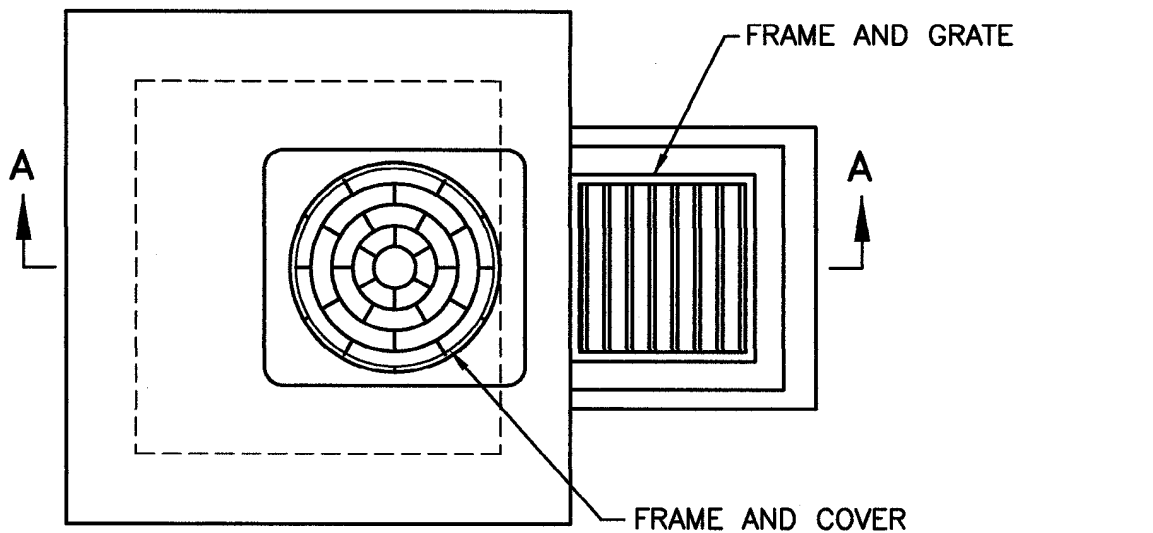
REVISIONS		
NO.	BY	DATE

James H. Casale
CHIEF ENGINEER
TRANSPORTATION

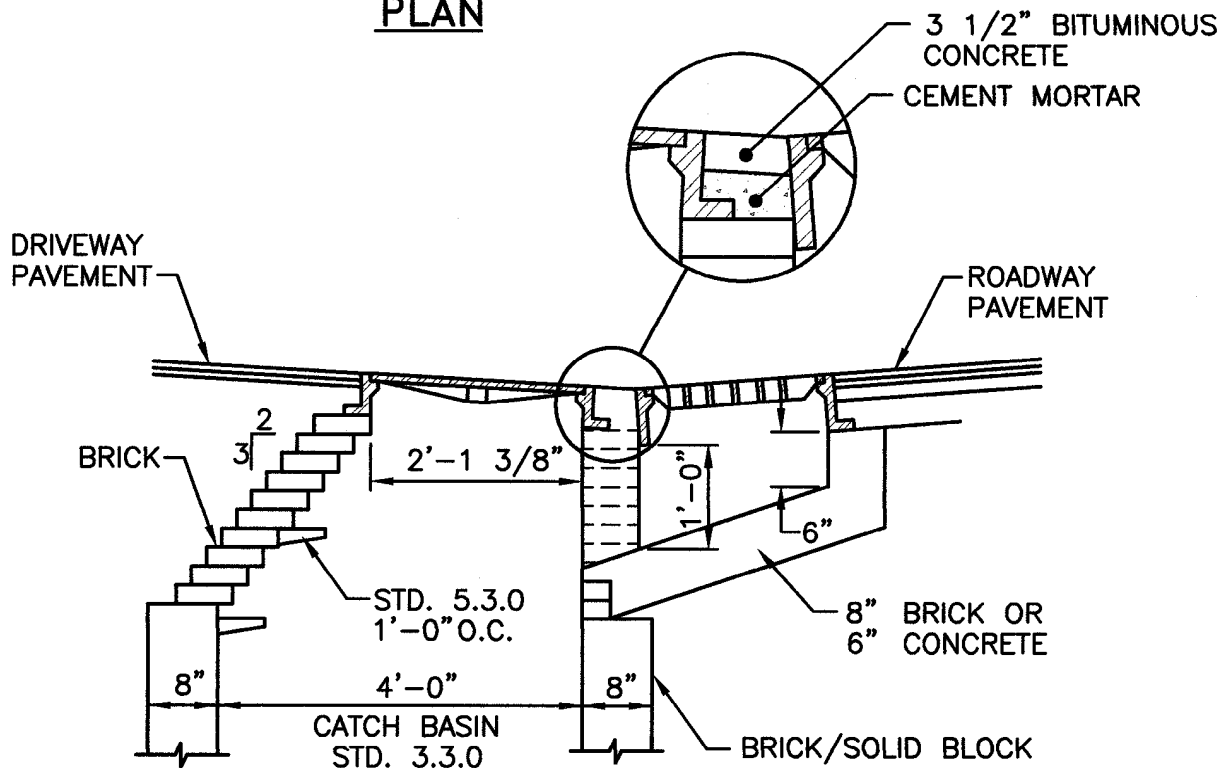
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





PLAN



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BRICK/SOLID BLOCK
DRIVEWAY BASIN AND GUTTER INLET**

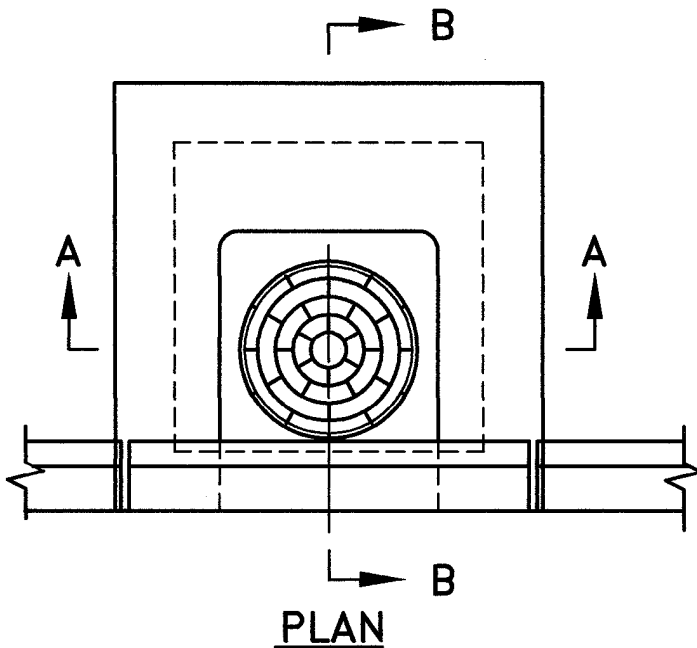
REVISIONS		
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James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

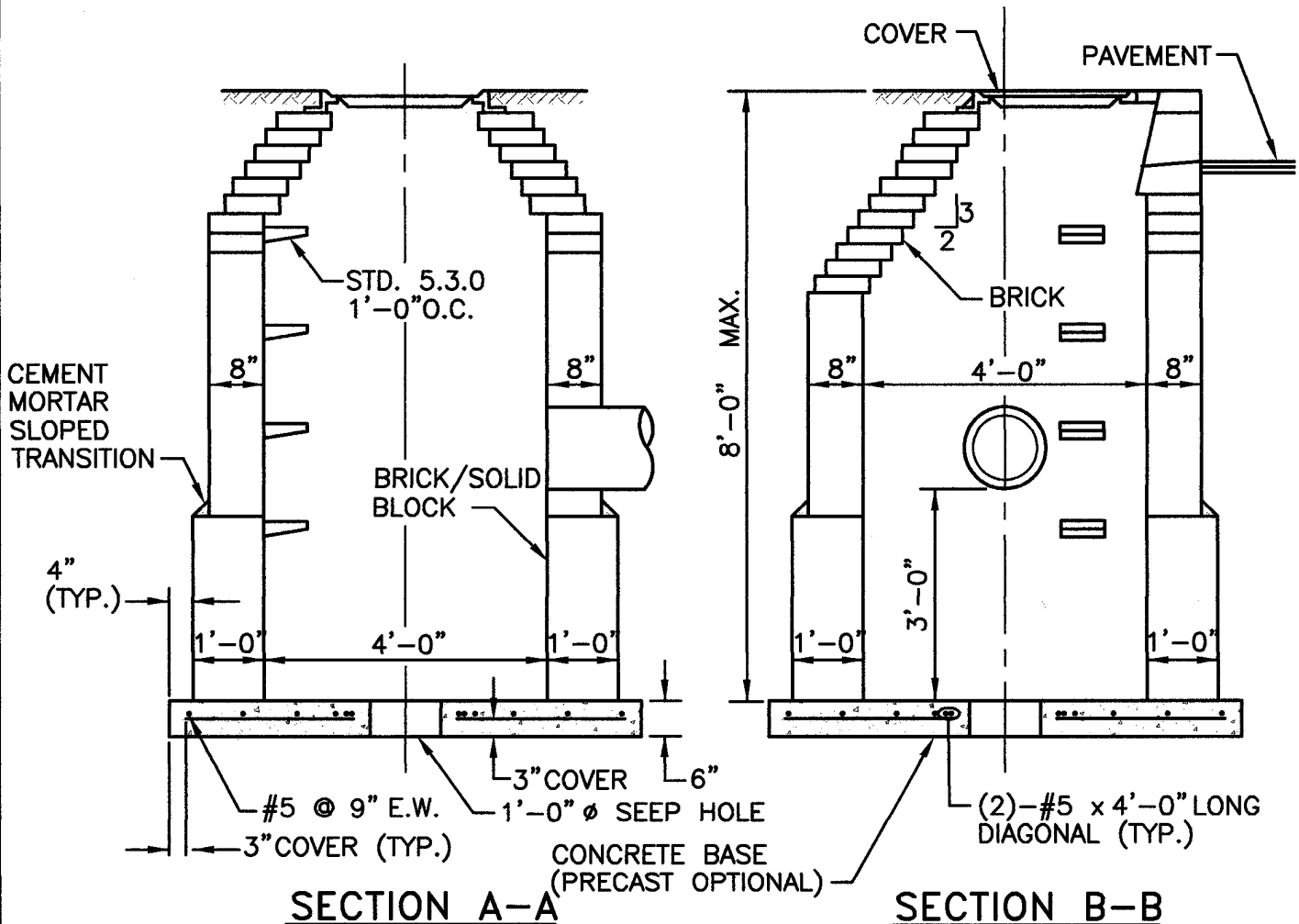
JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
3.3.1



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH AND 1'-0" WALLS UP TO 8'-0" DEPTH.



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BRICK/SOLID BLOCK
TYPE "D" SQUARE CATCH BASIN**

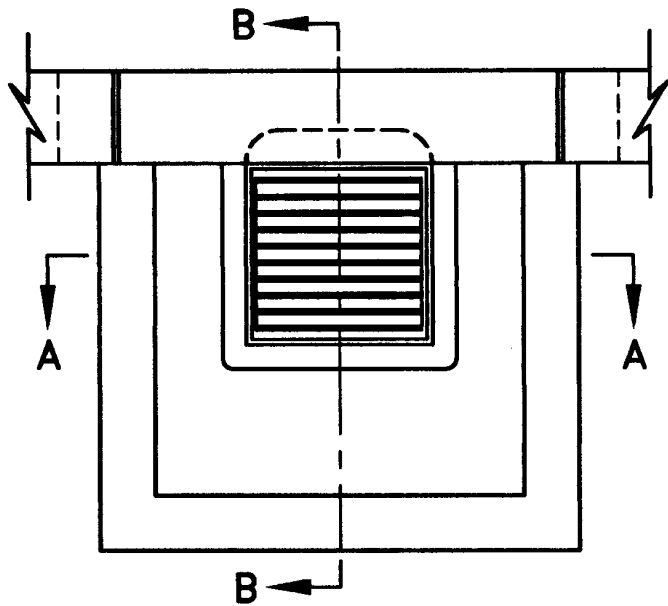
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James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

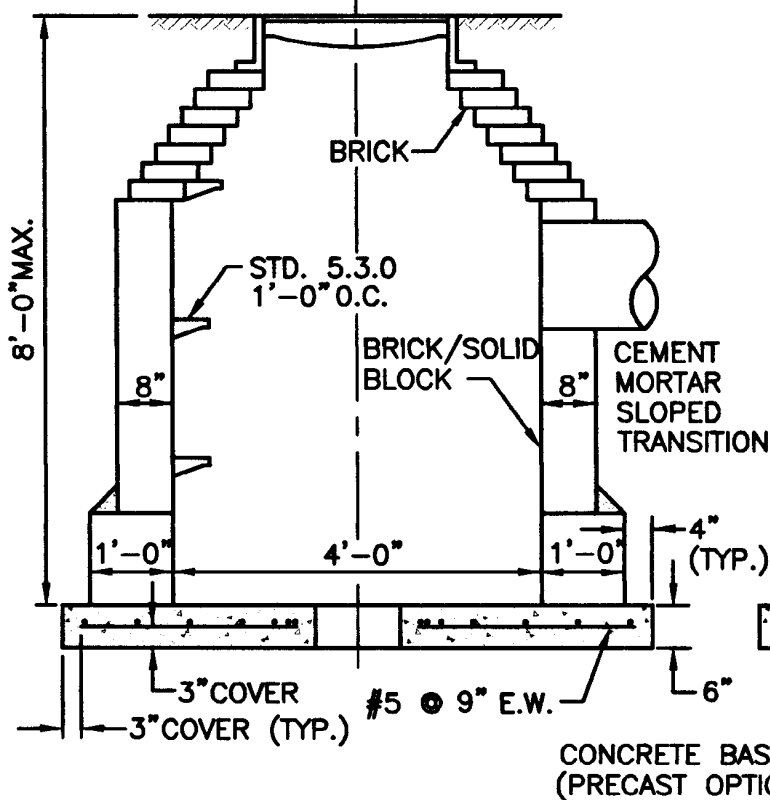




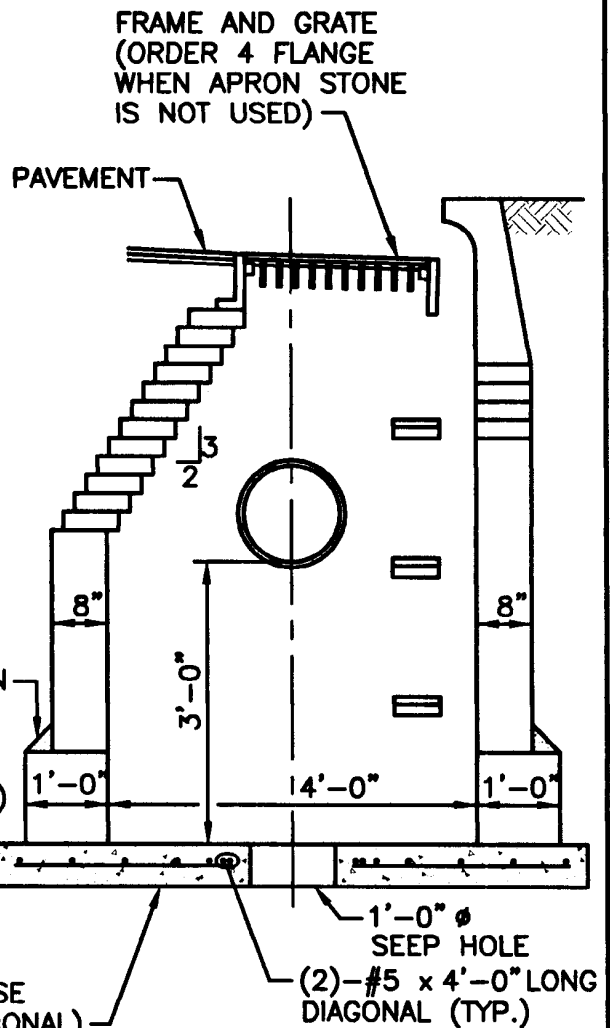
PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS TO 6'-0" DEPTH, USE 1'-0" WALLS TO 8'-0" DEPTH.



SECTION A-A



SECTION B-B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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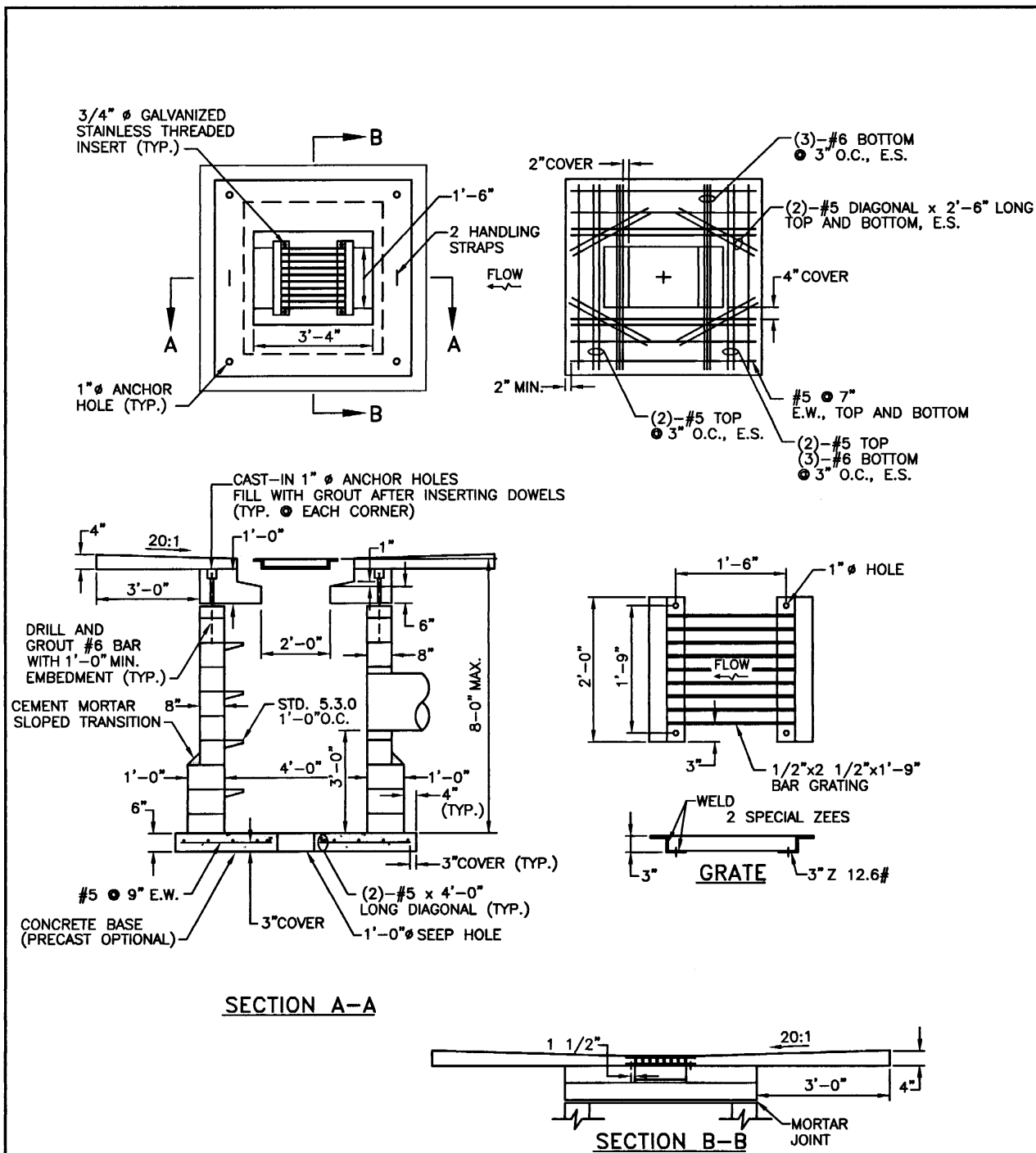
**BRICK/SOLID BLOCK
TYPE "F" SQUARE CATCH BASIN**

James H. Gagliardi
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TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ALL REINFORCING BARS TO BE 5'-0" LONG UNLESS OTHERWISE NOTED.
5. USE 8" WALLS UP TO 6'-0" DEPTH AND 1'-0" WALLS UP TO 8'-0" DEPTH.
6. ALL REINFORCING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SOLID BLOCK FLUSH SQUARE CATCH BASIN

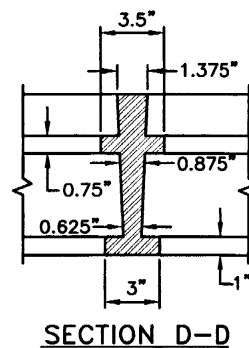
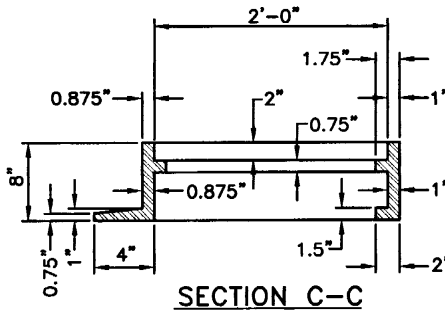
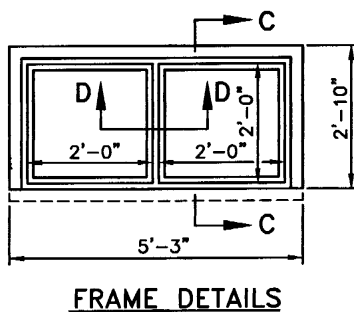
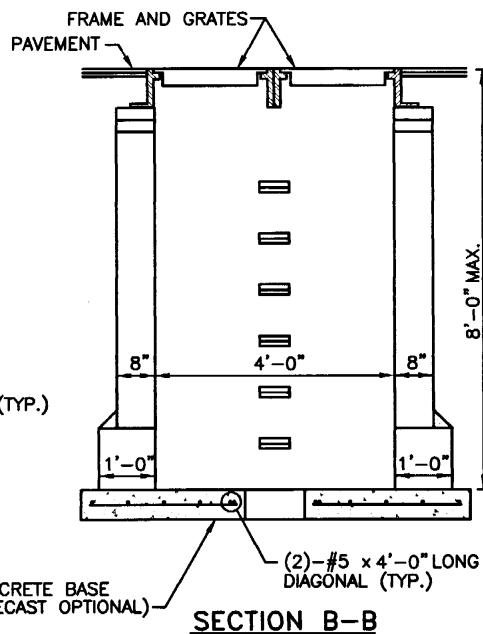
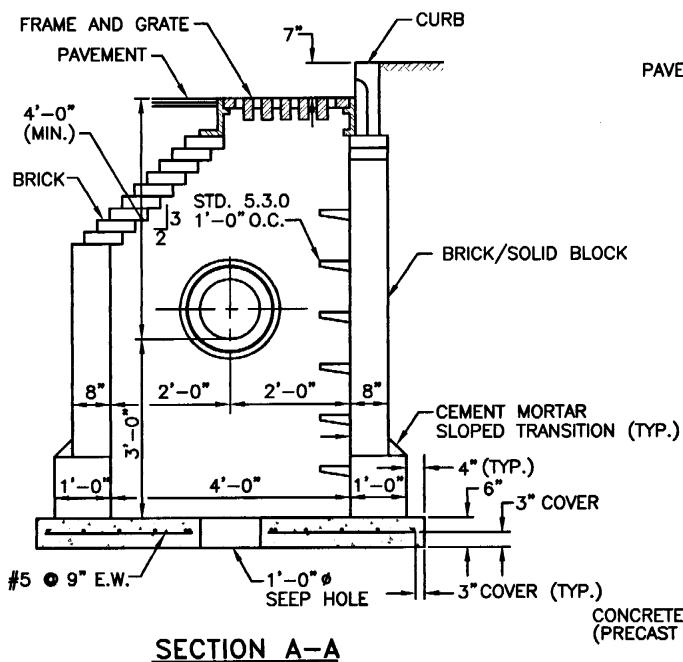
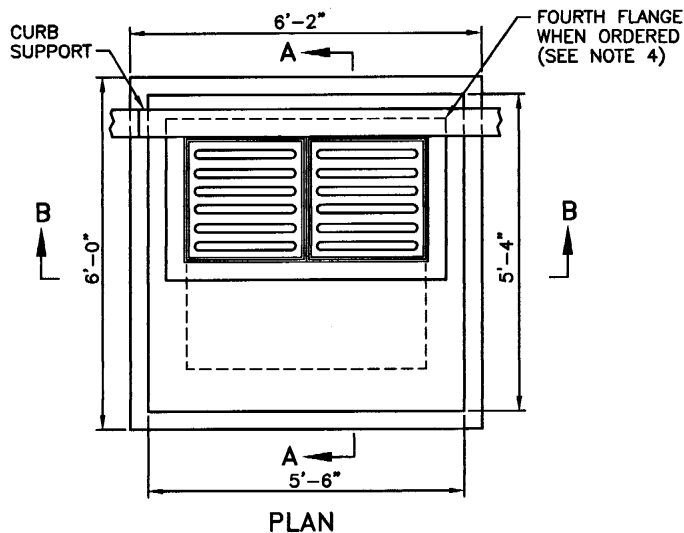
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James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN
GRATE PARALLEL TO EDGE OF PAVEMENT

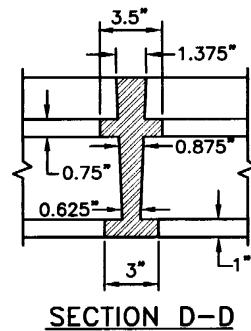
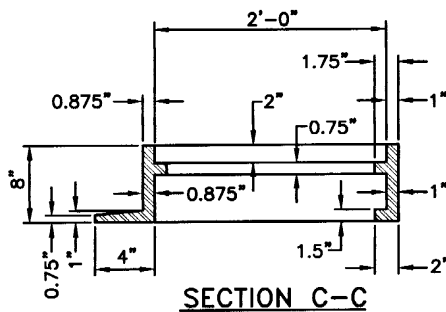
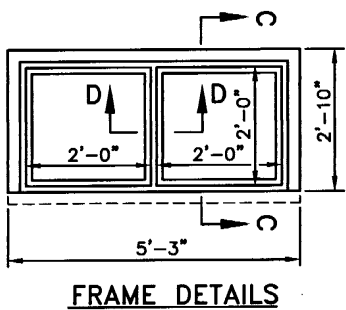
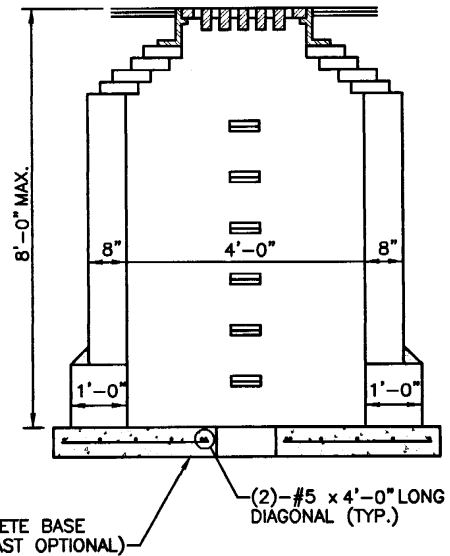
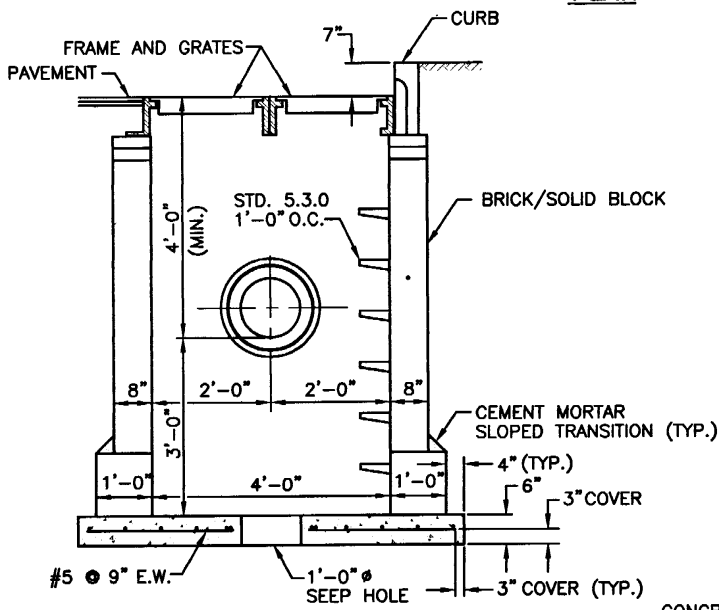
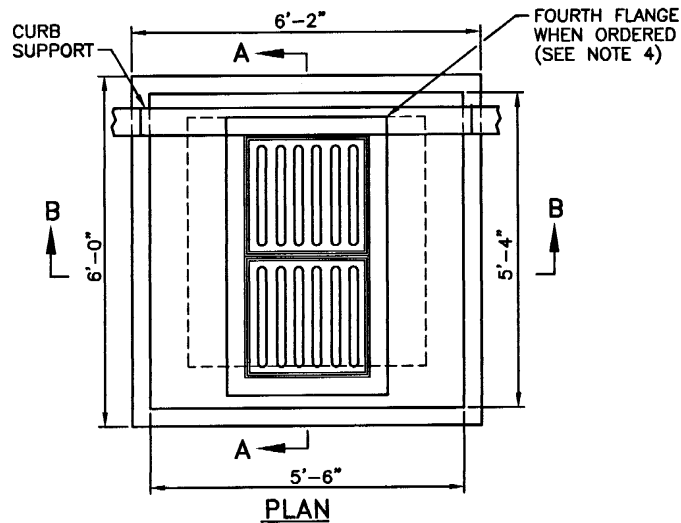
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James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Pendergast
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

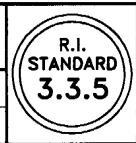
**BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN
 GRATE PERPENDICULAR TO EDGE OF PAVEMENT**

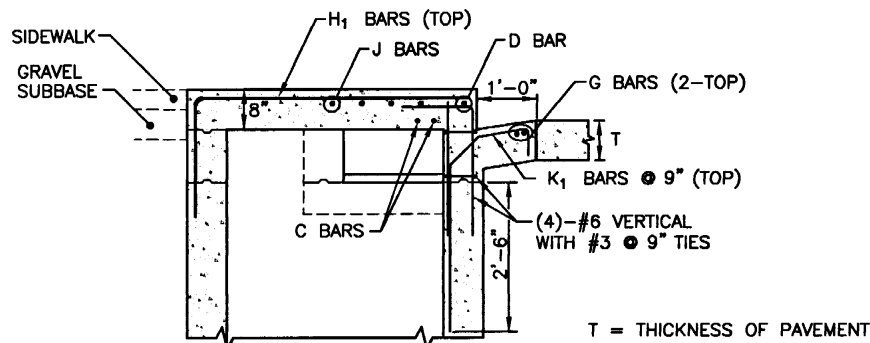
REVISIONS		
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James A. Gagliardi
 CHIEF ENGINEER
 TRANSPORTATION

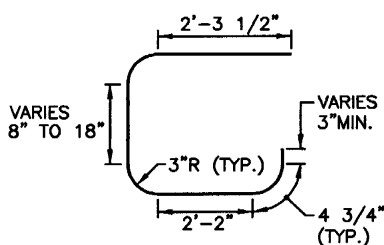
Edward P. Parker Jr.
 CHIEF DESIGN ENGINEER
 TRANSPORTATION

JUNE 15, 1998
 ISSUE DATE

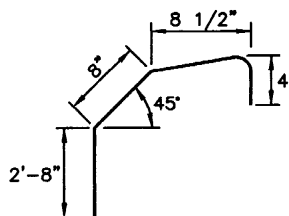




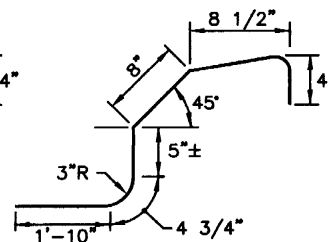
SECTION C-C



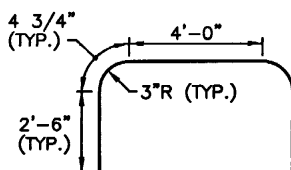
A BARS



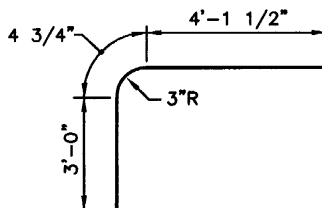
K₁ BARS



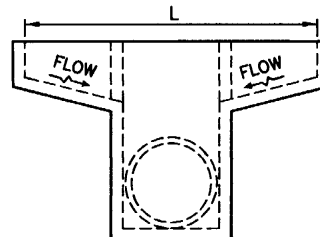
K₂ BARS



J BARS



H₁ BARS



NOTE: SKETCH SHOWS USE OF INLET SAGS.
BOTH SIDES TO BE SYMMETRICAL.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/4" EXPANSION JOINT NOT NECESSARY WHEN FLEXIBLE PAVEMENT IS USED FOR SIDEWALK OR ROADWAY.
3. THE COVERING FOR ALL REINFORCING STEEL SHALL BE 2", MEASURED FROM THE SURFACE OF THE CONCRETE TO THE FACE OF THE BAR, UNLESS OTHERWISE SHOWN.
4. THE HIGH CAPACITY INLET DETAILED HEREIN IS FOR USE ON A GRADE. IF IT IS TO BE USED IN A SAG, (SEE SKETCH HEREIN), IT SHOULD BE BUILT SYMMETRICALLY ABOUT THE CENTERLINE OF THE PIPE AND LENGTH OF OPENING SPECIFIED.
5. THE TYPE AND SIZE OF PIPE TO BE USED WITH THIS INLET SHALL BE THE TYPE AND SIZE AS CALLED FOR ON THE PLANS.
6. TYPICAL "KEYED" CONSTRUCTION JOINTS ARE SHOWN ON THE DETAILS HEREIN. OTHER "KEYED" OR "DOWELED" TYPE CONSTRUCTION JOINTS MAY BE USED IF ACCEPTABLE TO THE ENGINEER.
7. THE BEARING AREA OF FRAME AND COVER SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT FOR THE ENTIRE COVER IN THE FRAME. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING, AND THE COVER SHALL SEAT IN ITS FRAME WITHOUT ROCKING.
8. ALL REINFORCING BARS SHALL BE EPOXY COATED.
9. A SLAB TYPE MANHOLE AND STD. 7.1.0 PRECAST CURB TO BE USED WITH HIGH CAPACITY INLET.
10. THE BELL OR GROOVE OF CONCRETE PIPE CANNOT BE USED INSIDE THE INLET. IT MUST BE CUT OFF.
11. ALL EXPOSED EDGES AT CONSTRUCTION JOINTS SHALL BE BEVELED 3/4".
12. WHEN DEEMED NECESSARY, WEEP HOLES MAY BE INSTALLED IN THE SIDEWALLS OF INLETS DURING CONSTRUCTION TO PROVIDE BASE COURSE DRAINAGE PRIOR TO PLACEMENT OF PAVEMENT. THESE WEEP HOLES SHALL BE LOCATED AT OR BELOW SUBGRADE ELEVATION AS DIRECTED OR APPROVED BY THE ENGINEER TO PROPERLY DRAIN SUBSURFACE MATERIAL.
13. IF HIGH CAPACITY INLET IS TO BE CONSTRUCTED ALONG WITH A SIDEWALK, THE SIDEWALK SHALL BE CONSTRUCTED MONOLITHIC WITH THE TOP SLAB ON THE INLET. THE SIDEWALK SHALL BE REINFORCED WITH WELDED WIRE MESH 6x6-W2.9xW2.9 PLACED 2" BELOW SURFACE OF SIDEWALK AND EXTENDED INTO THE TOP SLAB OF THE INLET A MINIMUM DISTANCE OF 8".
14. BAR SIZES - B BARS, C BARS, D BARS, E BARS, F BARS, G BARS K₁ BARS AND K₂ BARS ARE ALL TO BE #5 BARS. H₁ BARS AND J BARS ARE ALL TO BE #6 BARS. A BARS ARE TO BE #7 BARS.
15. THE COST TO NOTCH THE CURB SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CURBING.

SHEET 2 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

HIGH CAPACITY INLET

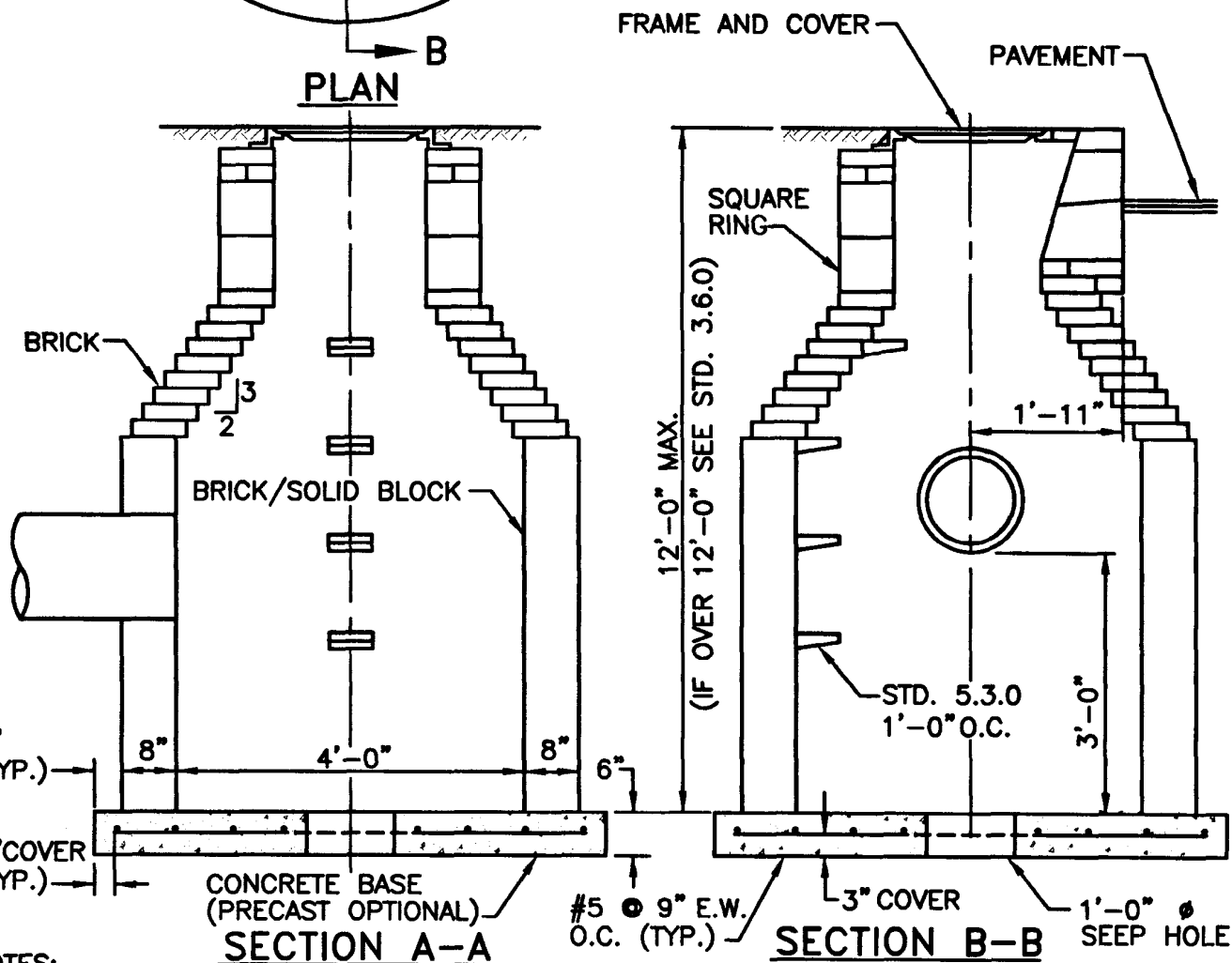
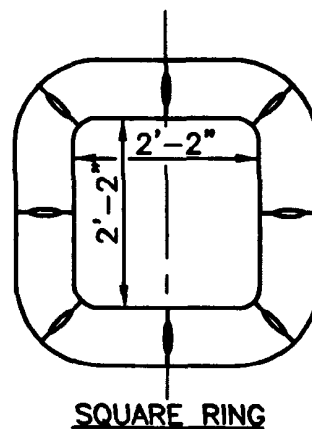
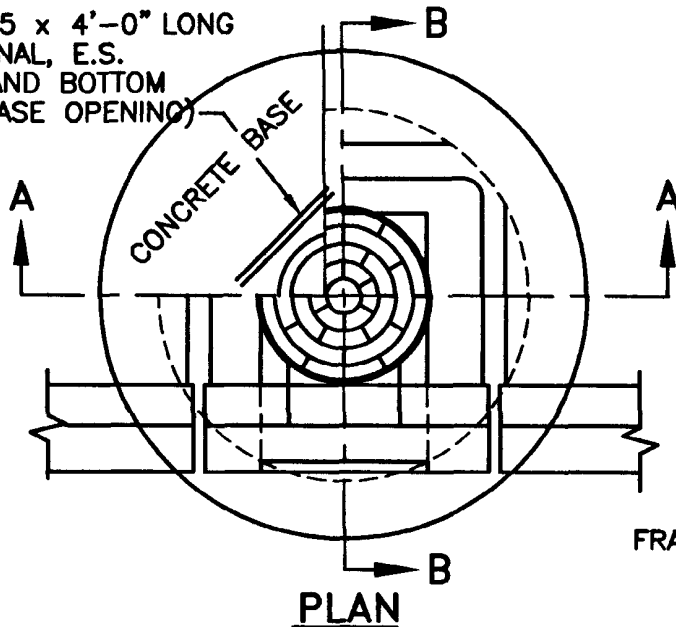
John R. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Porter Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



(2)-#5 x 4'-0" LONG
DIAGONAL, E.S.
TOP AND BOTTOM
(AT BASE OPENING)



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

**BRICK/SOLID BLOCK
TYPE "D" ROUND CATCH BASIN**

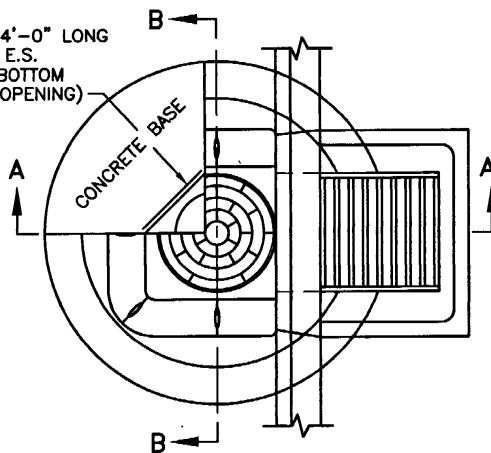
James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

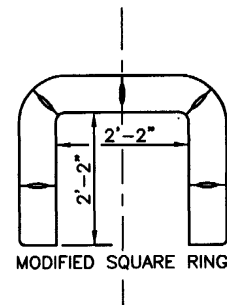
JUNE 15, 1998
ISSUE DATE



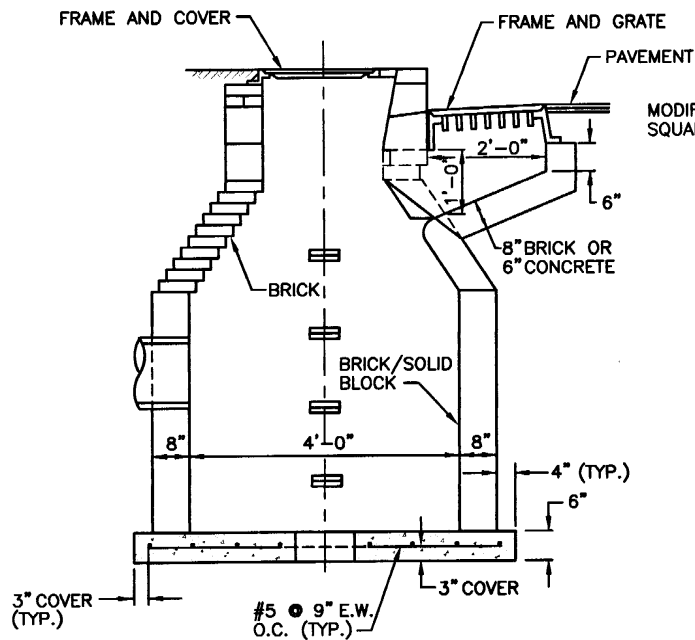
(2)-#5 x 4'-0" LONG
DIAGONAL, E.S.
TOP AND BOTTOM
(AT BASE OPENING)



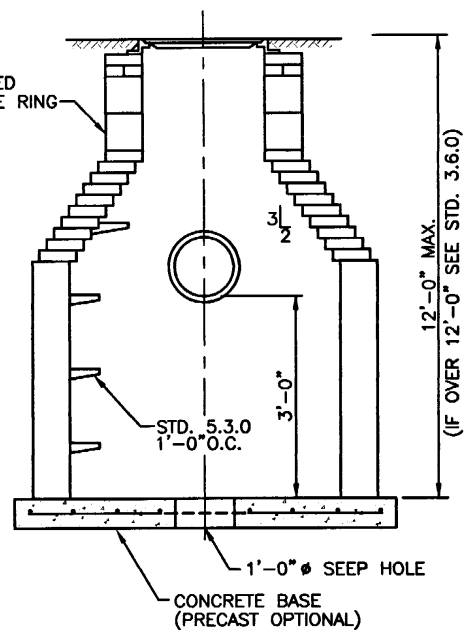
PLAN



MODIFIED SQUARE RING



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

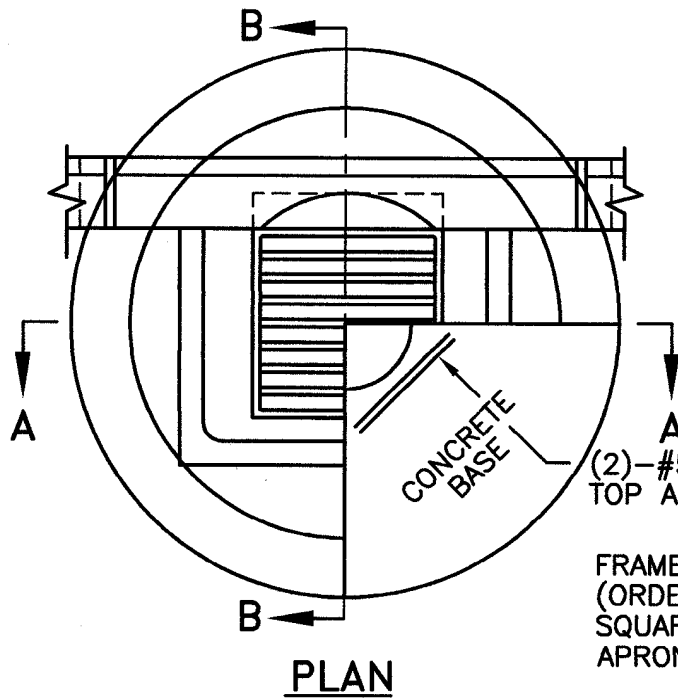
BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
3.4.1



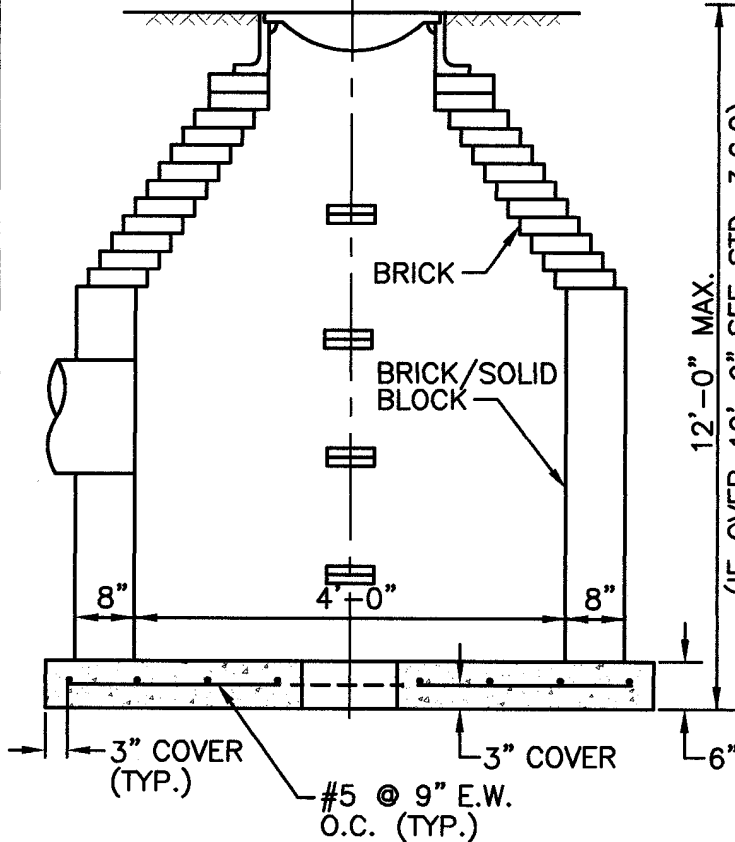
NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

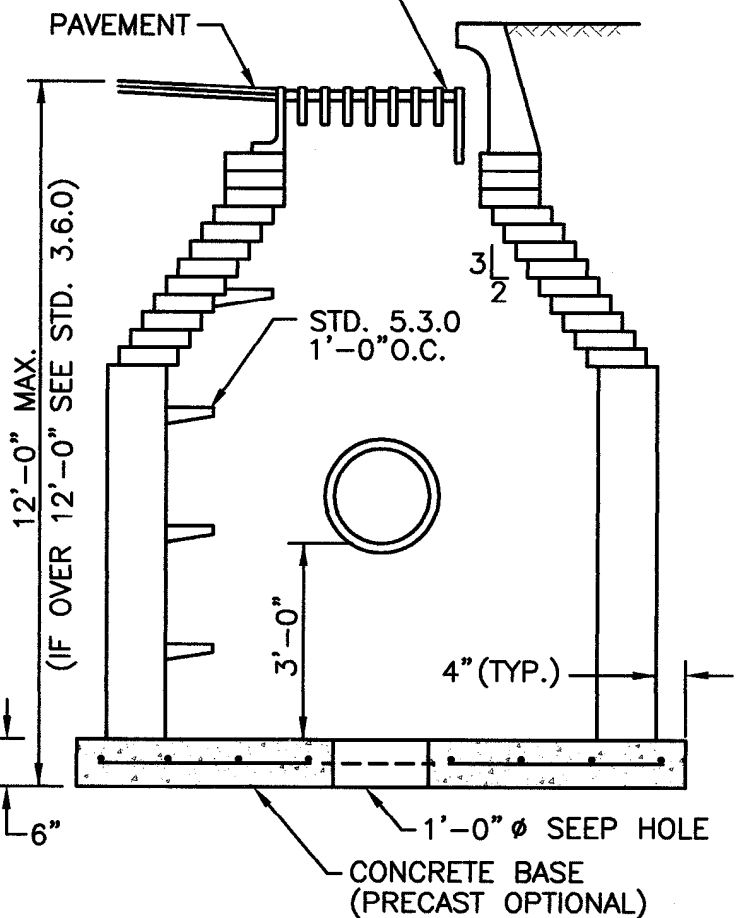
(2)-#5 x 4'-0" LONG, DIAGONAL, TOP AND BOTTOM (AT BASE OPENING)

FRAME AND GRATE
(ORDER 4 FLANGE AND SQUARE RING WHEN APRON STONE IS NOT USED)

PLAN



SECTION A-A



SECTION B-B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BRICK/SOLID BLOCK
TYPE "F" ROUND CATCH BASIN**

REVISIONS		
NO.	BY	DATE

James H. Czapinski
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



PLAN

3'-0"

4"

12'-0" MAX.
(IF OVER 12'-0" SEE STD. 3.6.0)

STD. 5.3.0
1'-0" O.C.

BRICK

BRICK/SOLID BLOCK

8"

3'-0"

4'-0"

4" (TYP.)

6"

3" COVER (TYP.)

3" COVER

#5 @ 9" E.W.
O.C. (TYP.)

1'-0" Ø SEEP HOLE

CONCRETE BASE
(PRECAST OPTIONAL)

SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

[illegible]

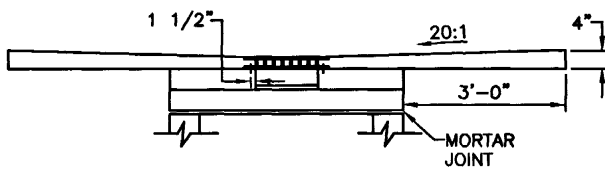
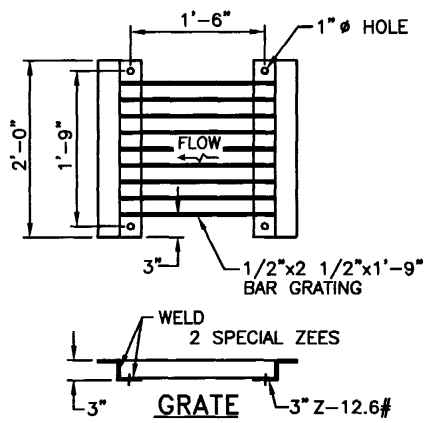
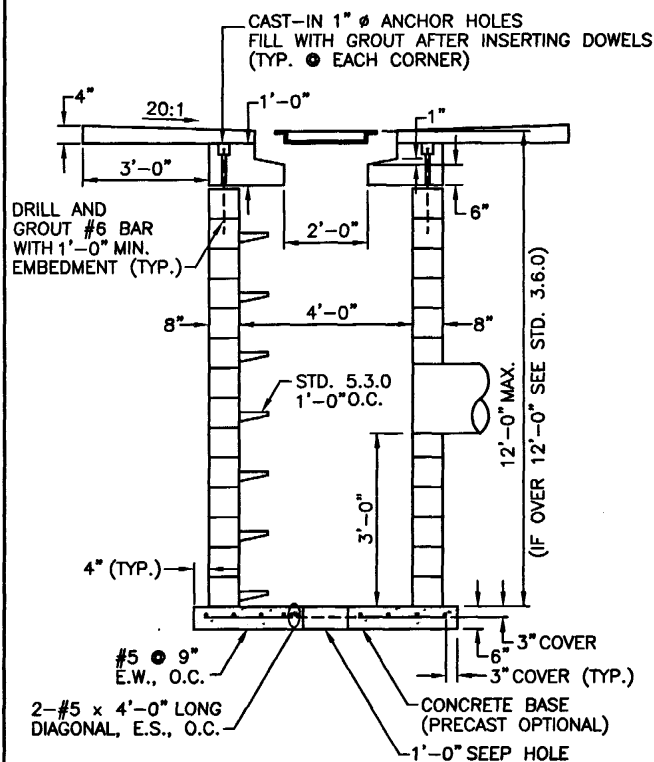
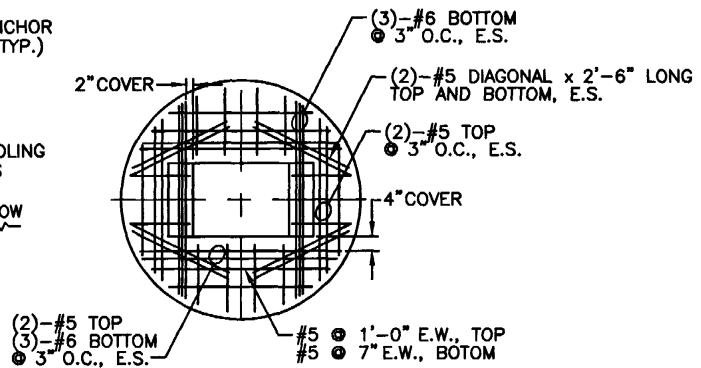
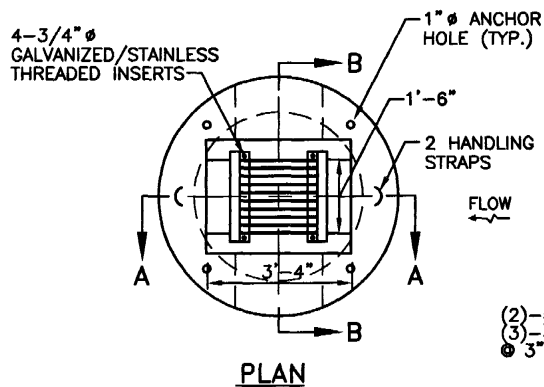
**BRICK/SOLID BLOCK
TYPE "R" CATCH BASIN**

James H. Gaudin
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

**R.I.
STANDARD
3.4.3**



SECTION A-A

SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.
4. ALL REINFORCING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SOLID BLOCK FLUSH ROUND CATCH BASIN

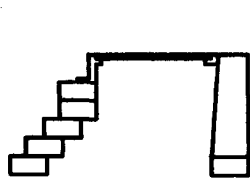
REVISIONS		
NO.	BY	DATE

James K. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

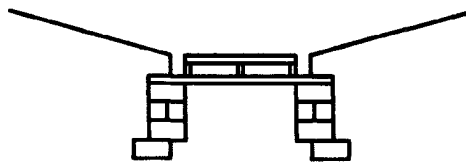
Edward J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

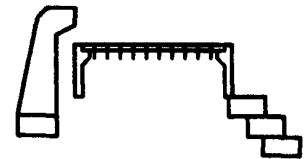




TYPE "D"

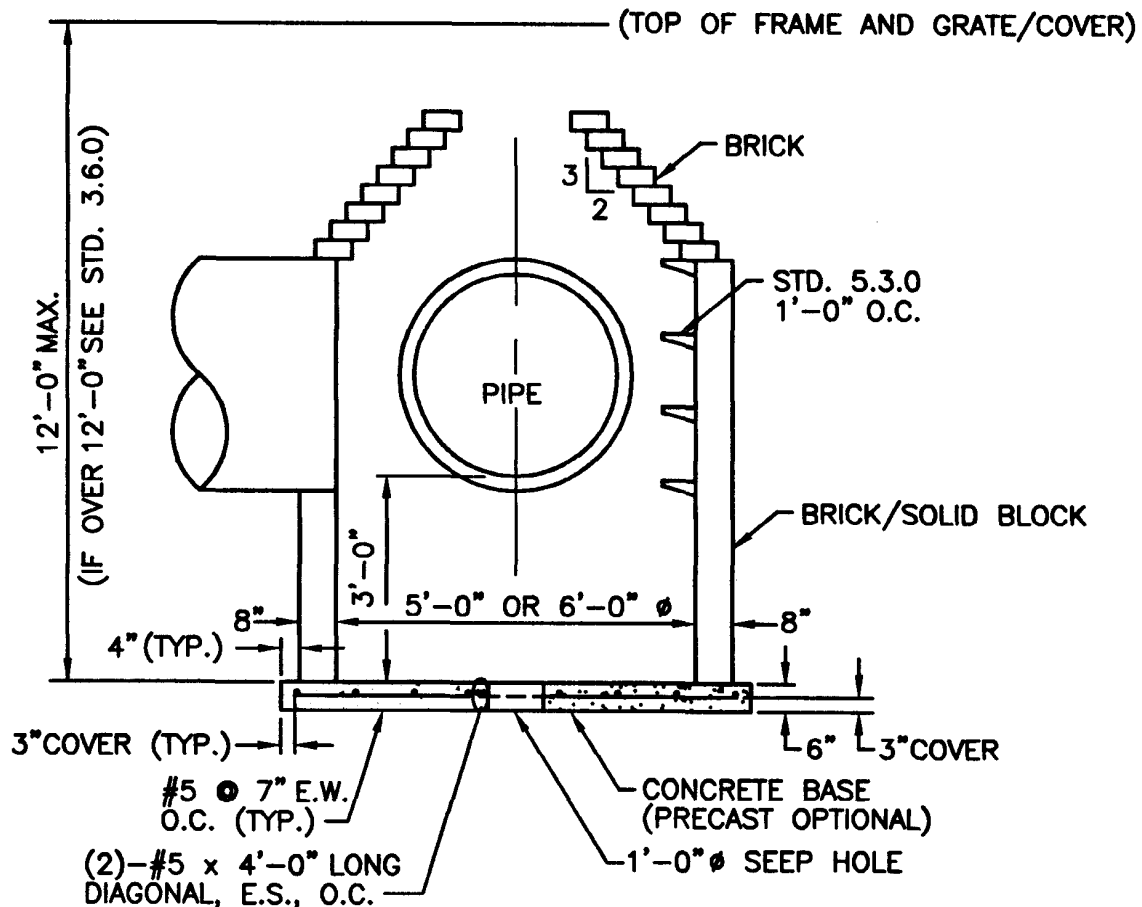


TYPE "R"



TYPE "F"

TYPE CATCH BASIN AS REQUIRED



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

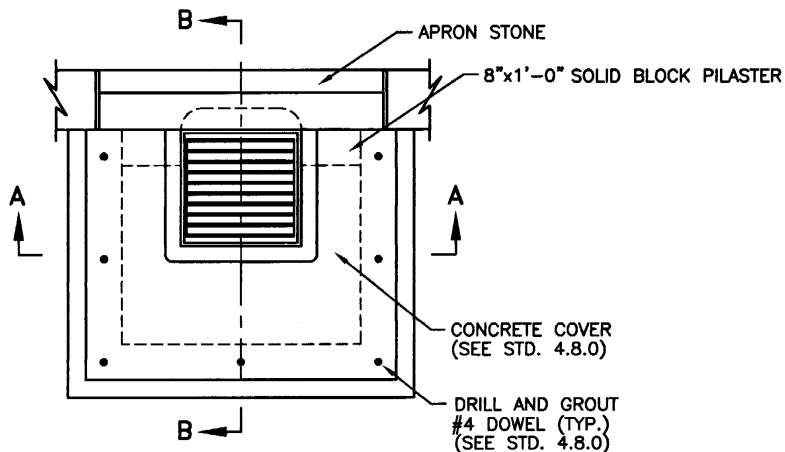
**BRICK/SOLID BLOCK
5'-0" OR 6'-0" ROUND CATCH BASIN**

James H. Czapla
CHIEF ENGINEER
TRANSPORTATION

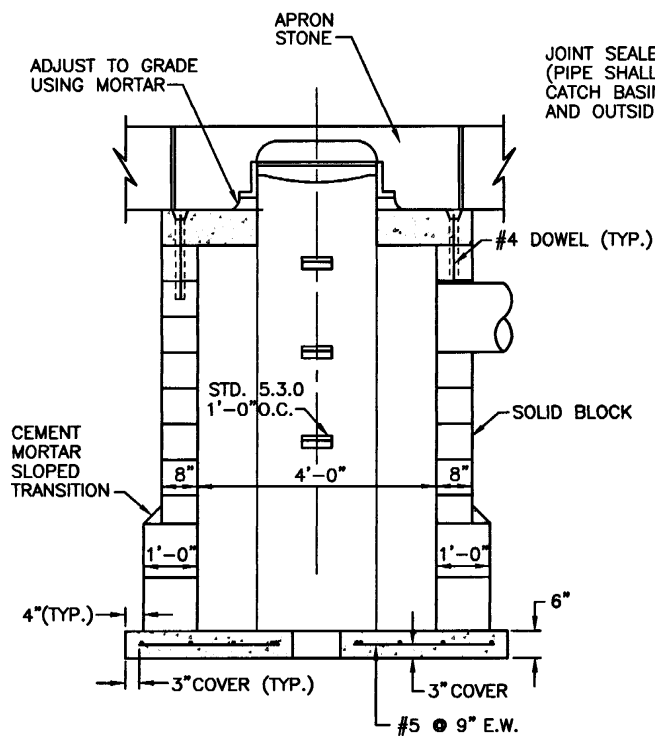
Edmund J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

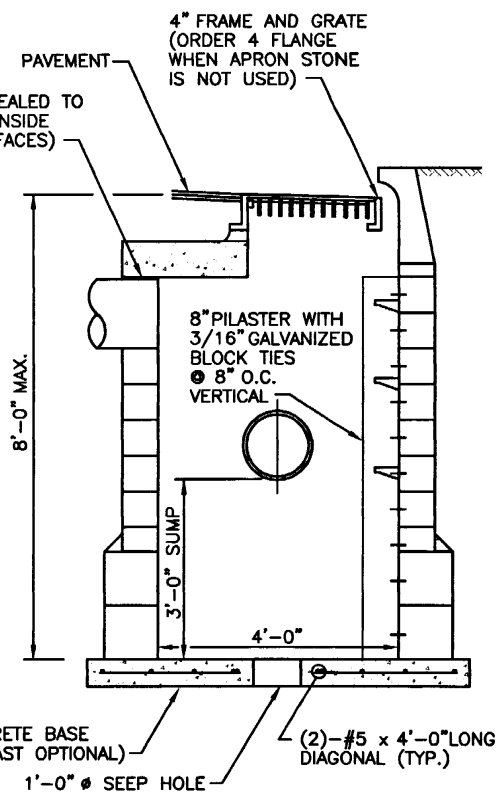




PLAN



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN
(PIPE COVER 1'-6" TO 3'-0")

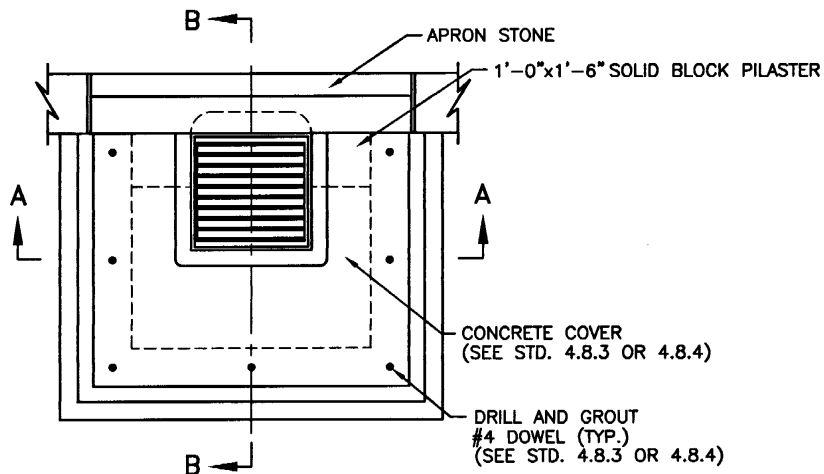
REVISIONS		
NO.	BY	DATE

James D. Capelli
CHIEF ENGINEER
TRANSPORTATION

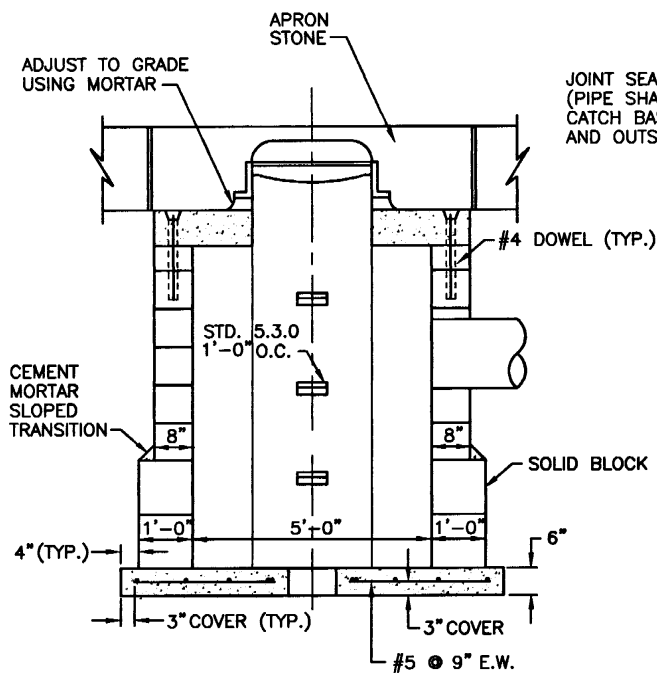
Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

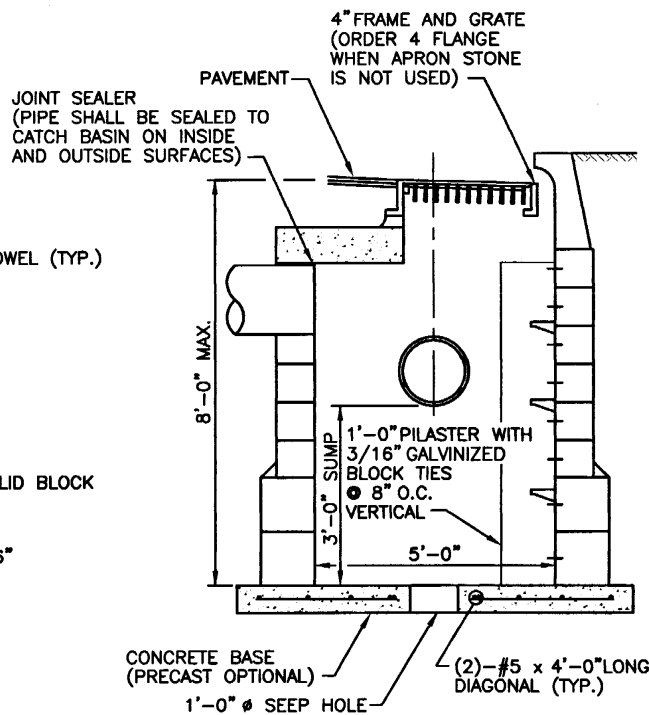




PLAN



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

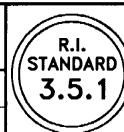
REVISIONS		
NO.	BY	DATE

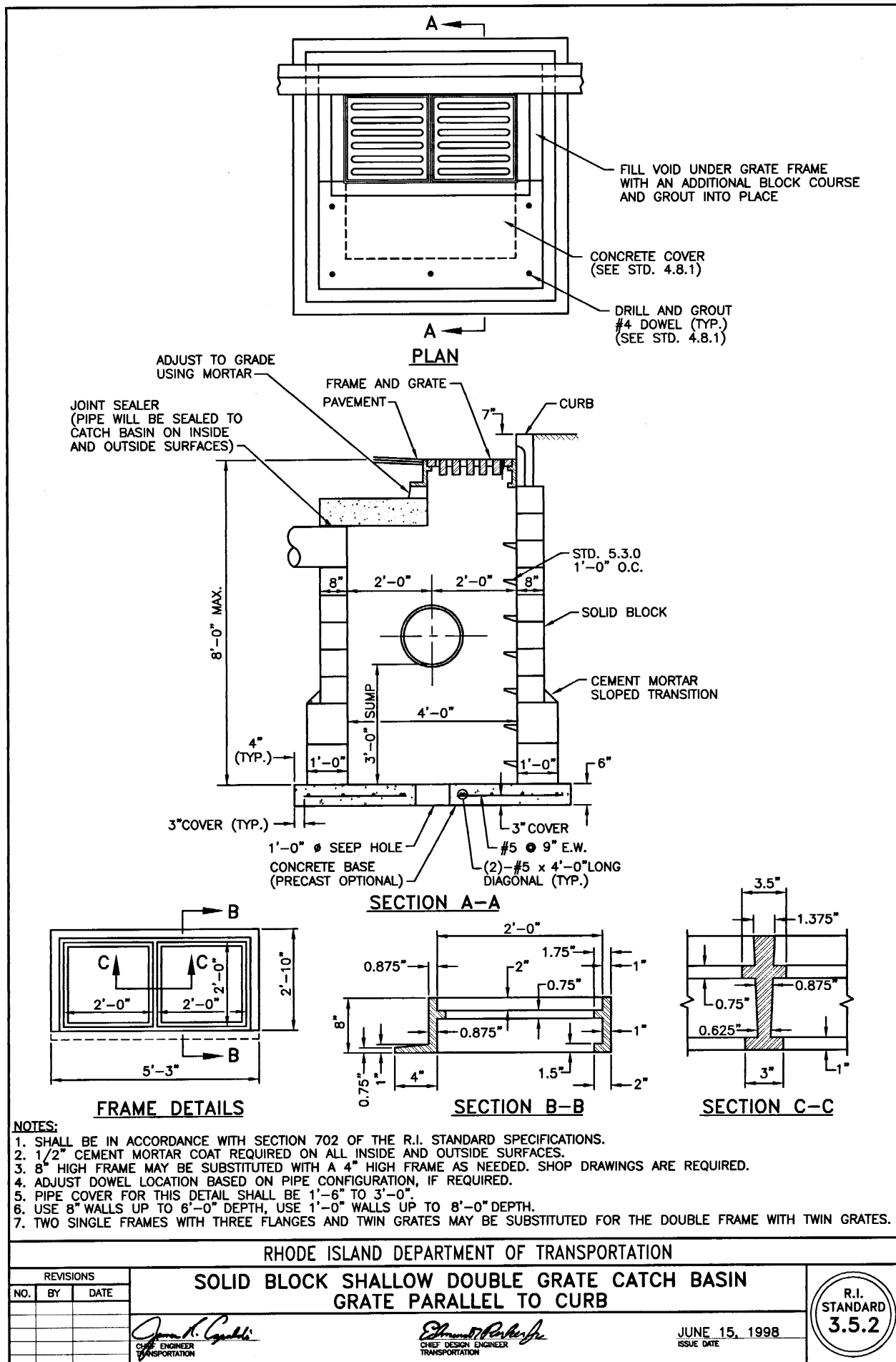
**SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN
(PIPE COVER 1'-6" TO 3'-0")**

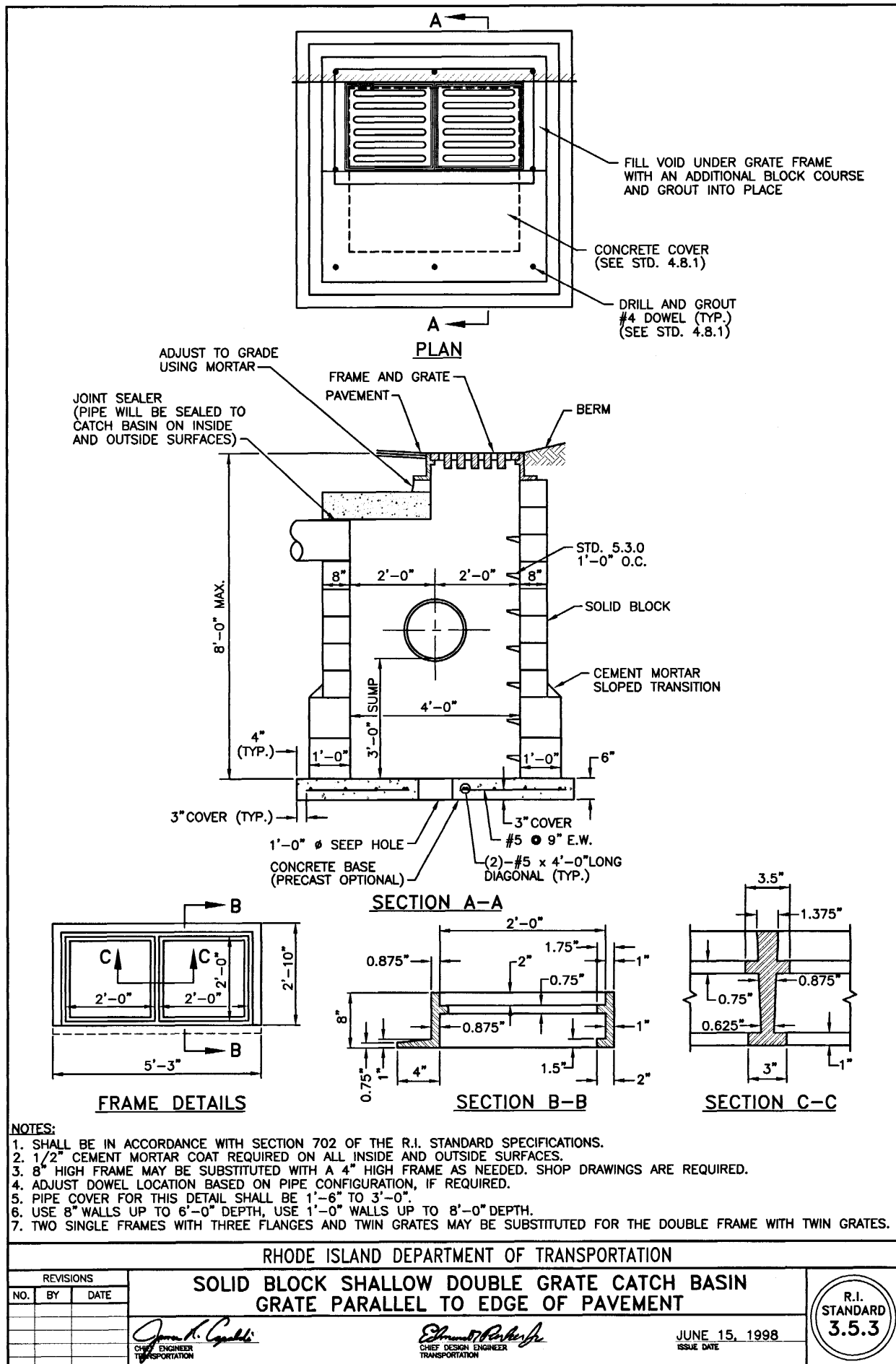
James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

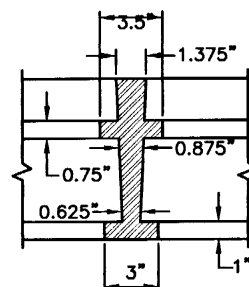
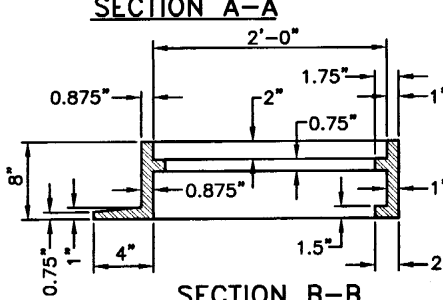
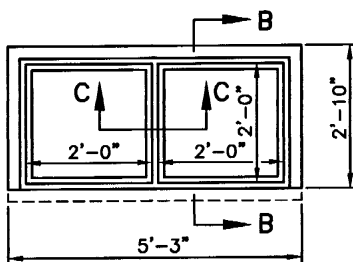
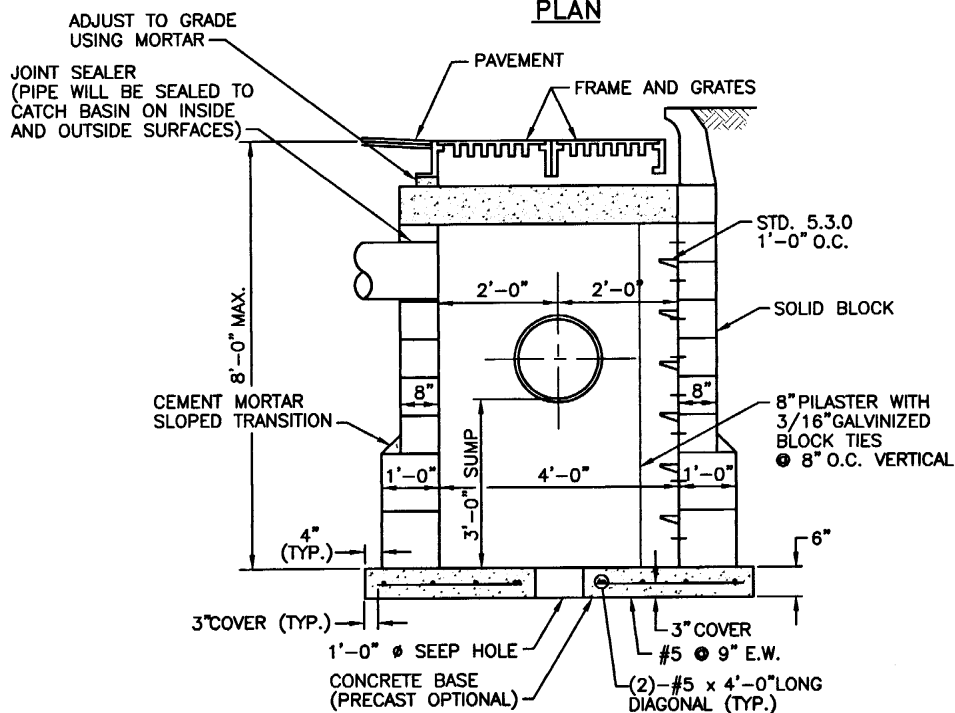
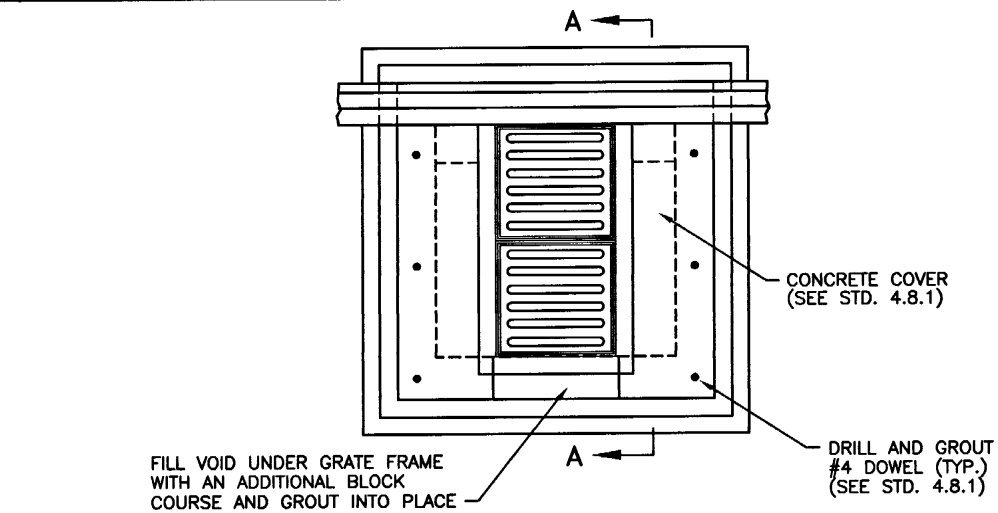
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE









NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

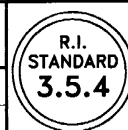
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN
GRATE PERPENDICULAR TO CURB

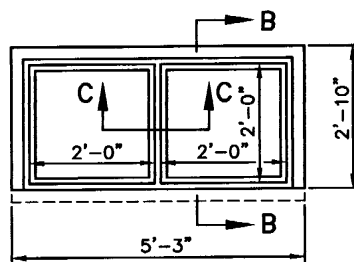
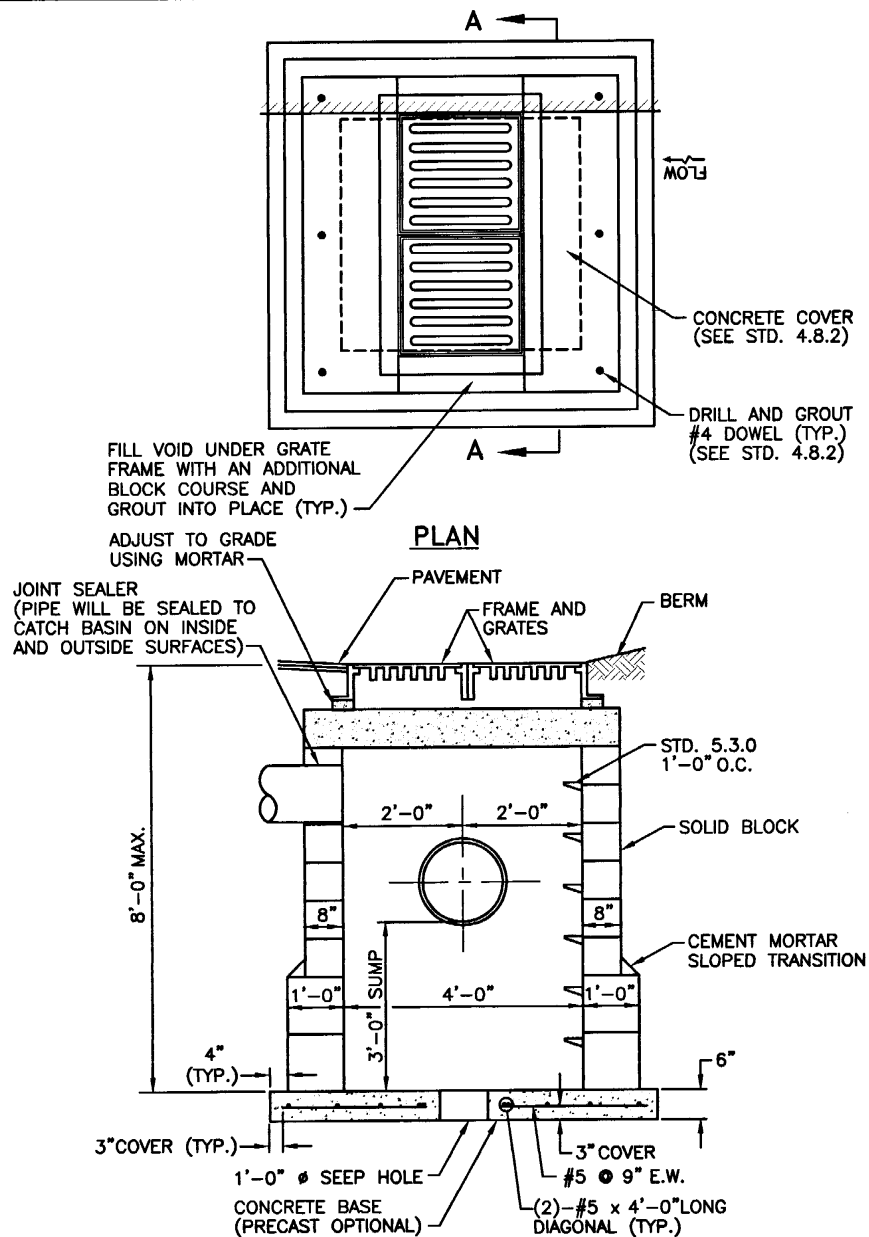
REVISIONS		
NO.	BY	DATE

James R. Gault
CHIEF ENGINEER
TRANSPORTATION

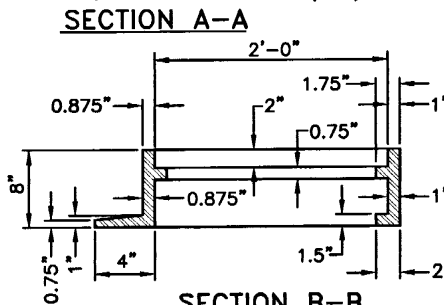
Edward J. Palka
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

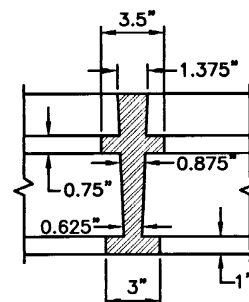




FRAME DETAILS



SECTION B-B



SECTION C-C

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

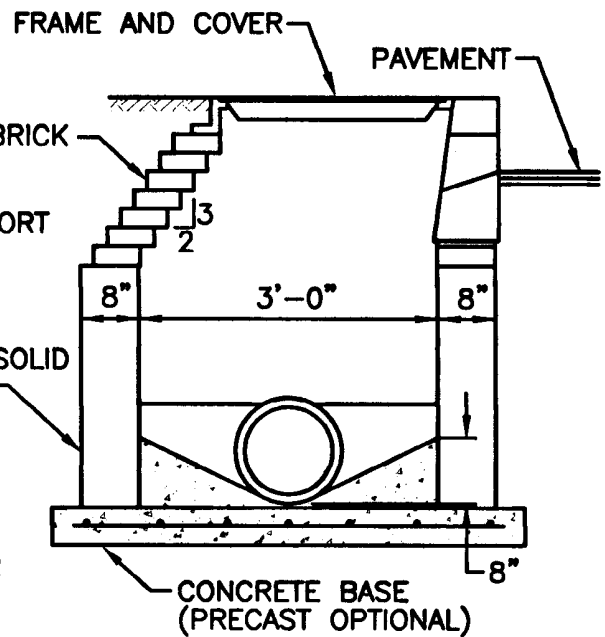
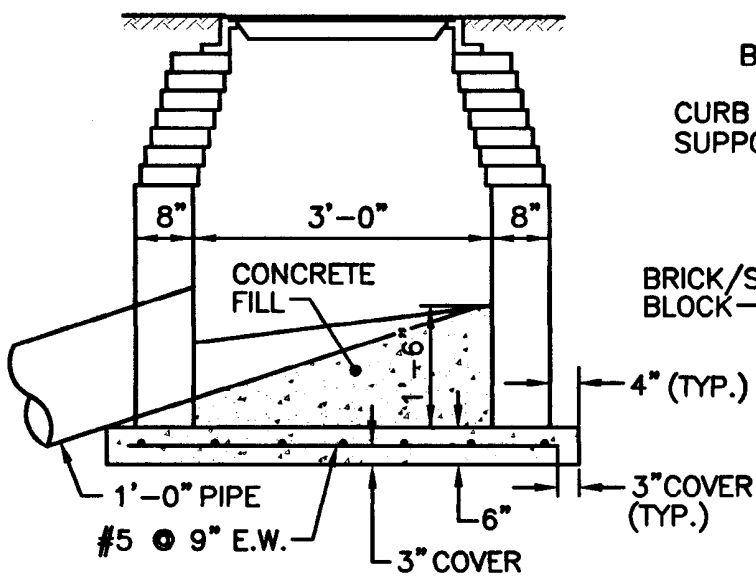
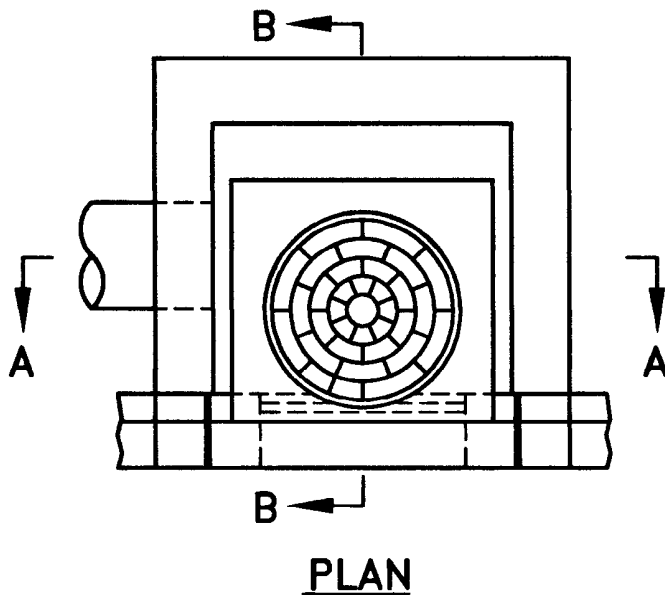
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN
GRATE PERPENDICULAR TO EDGE OF PAVEMENT

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edward R. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





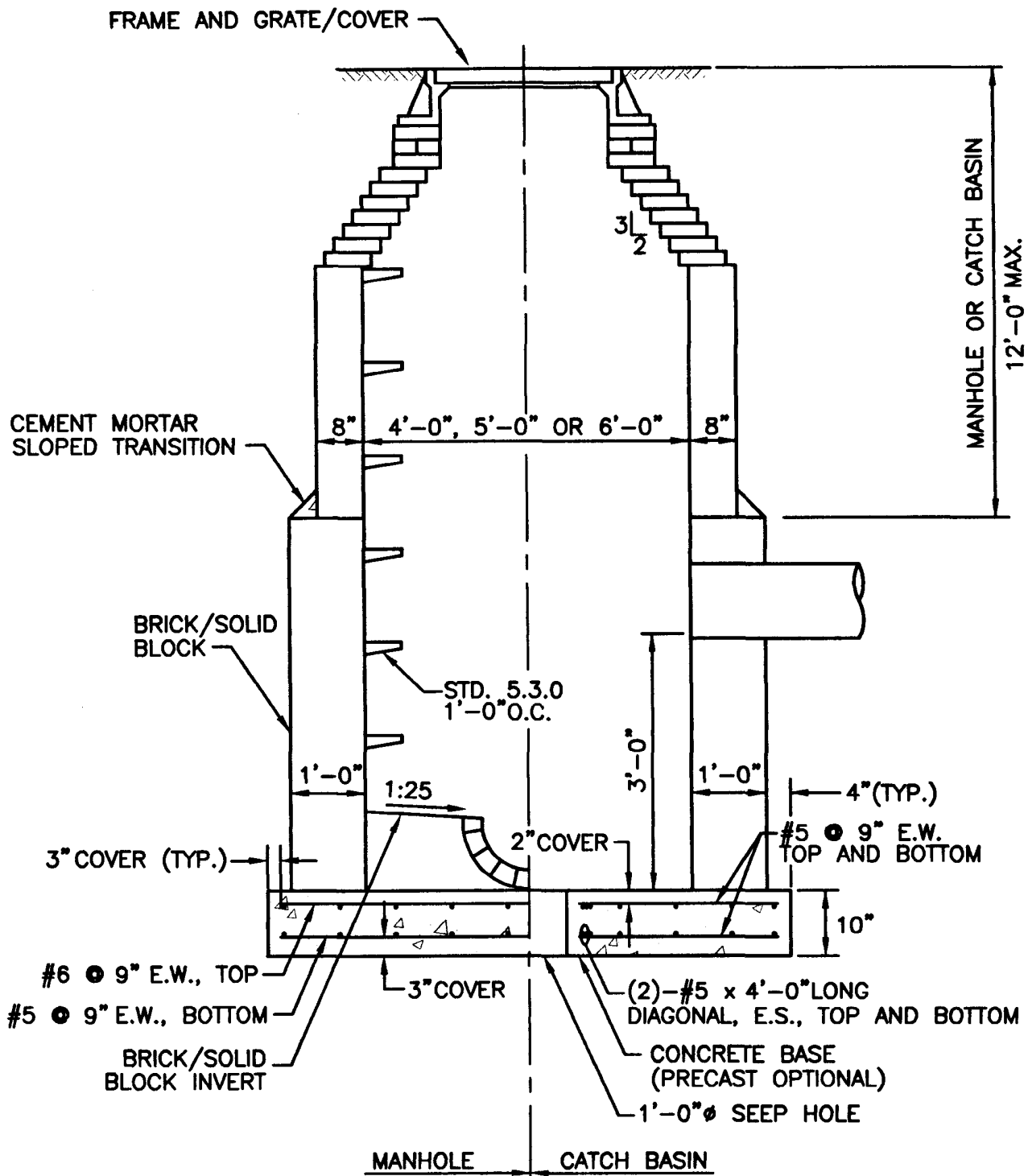


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BRICK/SOLID BLOCK DROP INLET	<div><div>R.I. STANDARD 3.6.0</div></div>
NO.	BY	DATE		
			<div><div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div></div>	



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BRICK/SOLID BLOCK ROUND
MANHOLES AND CATCH BASINS
DEPTH GREATER THAN 12'-0"**

REVISIONS		
NO.	BY	DATE

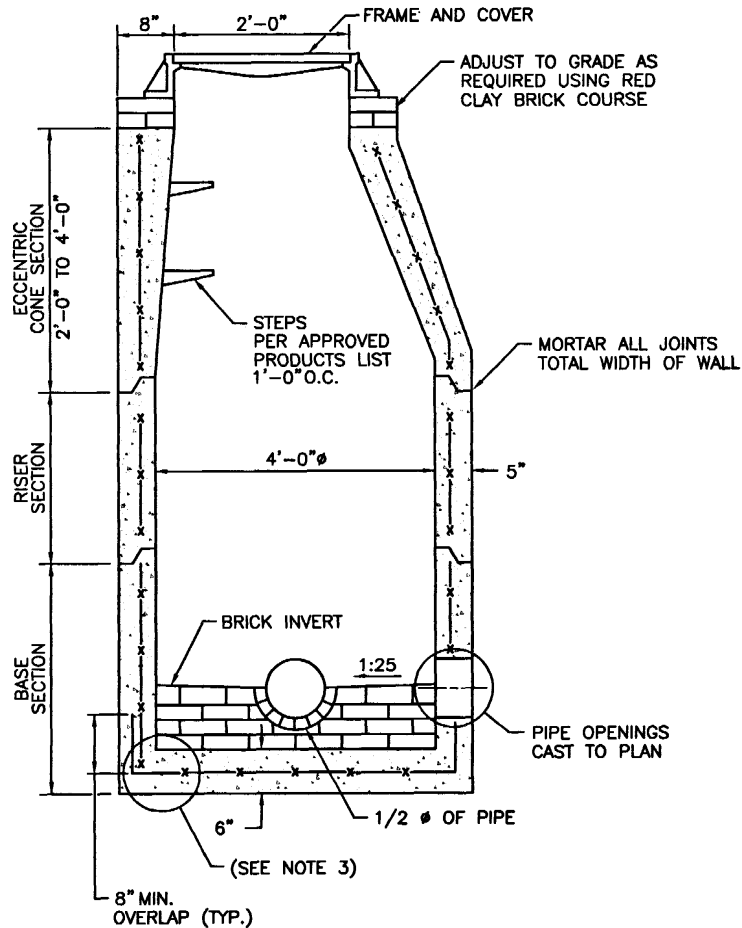
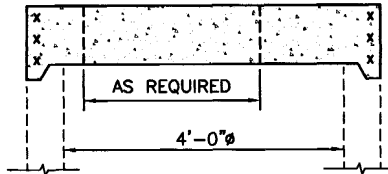
John A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



ALTERNATE TOP LOADING (SEE NOTES 7 AND 8)



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN. / LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST 4'-0" ROUND MANHOLE

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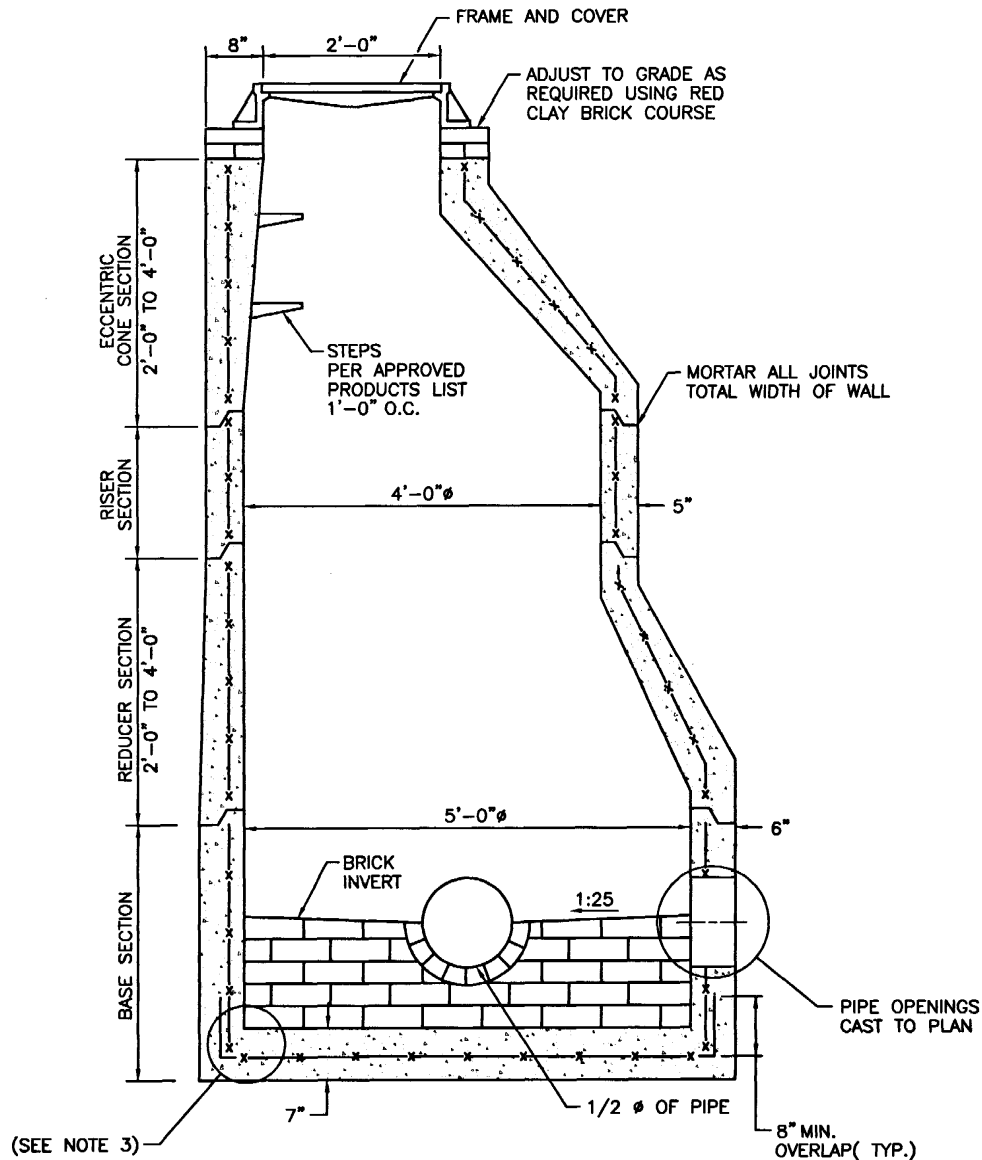
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Diagram illustrating the required reinforcement for a concrete slab. The reinforcement is shown as a series of bars (X) extending across the slab. The length of the reinforcement is specified as 4'-0" OR 5'-0" Ø.



1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.0).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

PRECAST 5'-0" ROUND MANHOLE

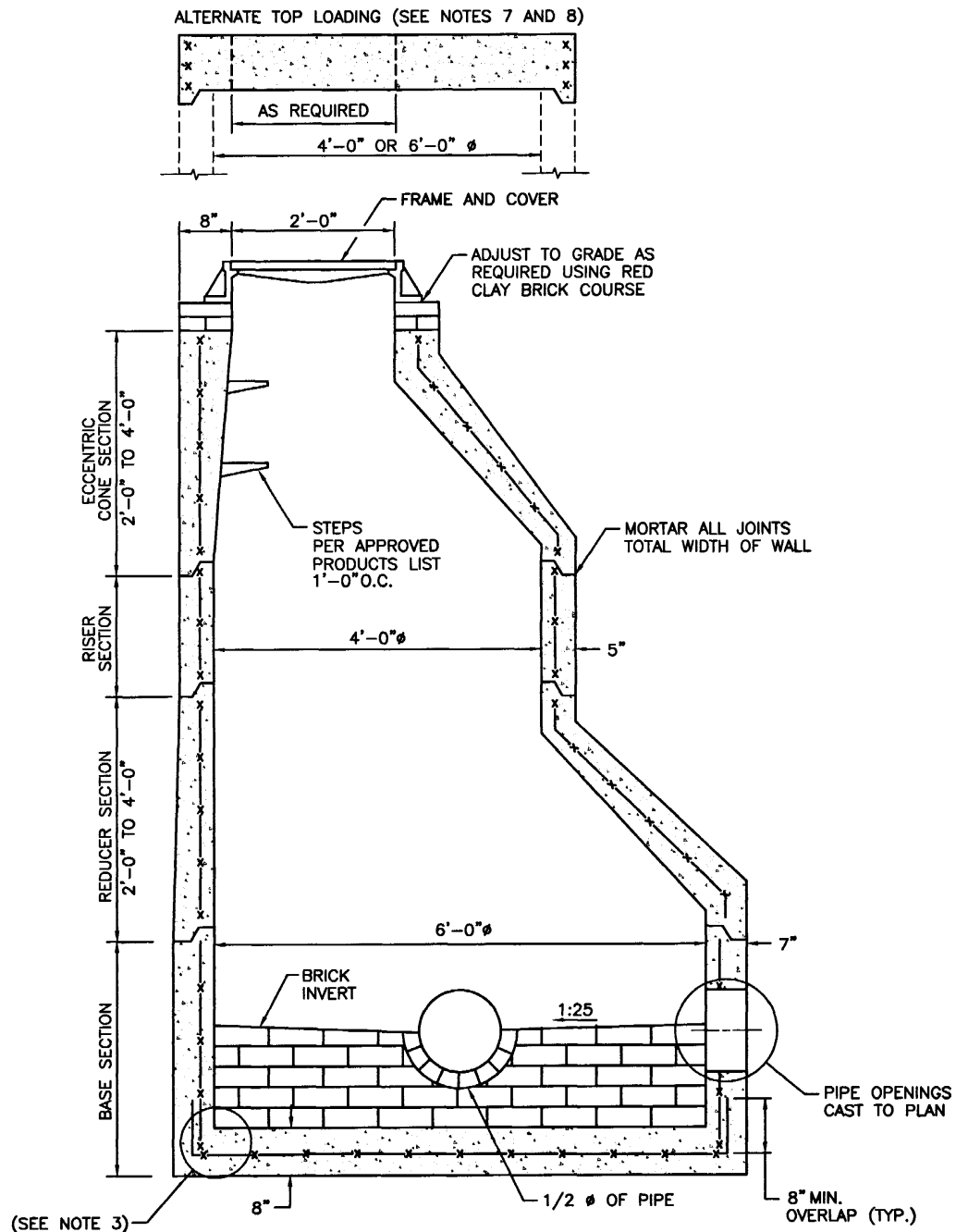
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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

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PRECAST 6'-0" ROUND MANHOLE

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ADJUST TO GRADE AS REQUIRED
USING RED CLAY BRICK COURSE

2'-0" MAX. COVER

REFER TO STD. 4.6.1 FOR TOP SLAB
FOR ALTERNATE TOP SLAB MONOLITHIC
WITH RISER SECTION, SEE STD. 4.6.2

MORTAR ALL
JOINTS TOTAL
WITH OF WALL

#4 @ 8"
E.F., HORIZONTAL

STD. 5.3.0
1'-0" O.C.

#4 @ 9"
E.F., VERTICAL

#4 @ 9"
E.F., VERTICAL

REINFORCED CONCRETE
PLUG FOR SLOTTED HOLES

#4 @ 8"
E.W., HORIZONTAL

SLOTTED HOLES
WILL BE PERMITTED
(SEE NOTE 9)

CATCH BASIN WIDTH (C)	A	B
4'-0"	8"	8"
6'-0"	9"	9"

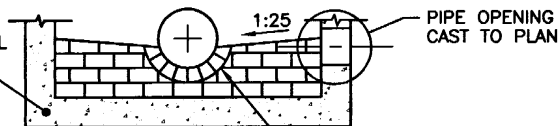
#4 @ 9"
E.W., BOTTOM

#5 @ 9"
E.W., TOP

STANDARD ACI HOOK

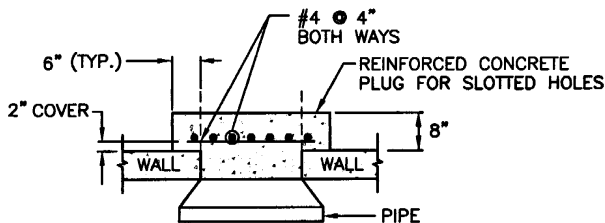
CATCH BASIN

FOR REINFORCING STEEL
SEE CATCH BASIN



MANHOLE

1/2" Ø OF PIPE



SECTION B-B

ALTERNATE POSITIONING
OF VERTICAL BARS

SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
4. TOP SLAB, RISER AND BASE SECTIONS HAVE BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB, RISER AND BASE SECTIONS ARE DESIGNED FOR AXLE LOAD OF NO GREATER THAN 20 TONS.
5. THERE IS TO BE 2" MINIMUM COVER ON ALL REBAR.
6. ALL REBARS ARE TO HAVE MINIMUM 2" CLEARANCE FROM OPENING.
7. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
8. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'-7".
9. WHERE THE CLEARANCE FROM THE TOP OF THE PIPE TO THE RIM IS "B" OR LESS, PLUGS SHALL BE USED IN CONJUNCTION WITH SLOTTED HOLES. NO SLOTTED HOLE WILL BE PERMITTED WHERE THE CLEARANCE IS GREATER THAN 8". IN CASES WHERE SLOTTED HOLES ARE NOT USED AND THE WALL OPENING COMES WITHIN 1'-3" OF THE RIM, AN ADDITIONAL #8 BAR SHALL BE USED ABOVE THE OPENING THE WIDTH "C" OF THE WALL.

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PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN

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ALTERNATE TOP SLAB (SEE NOTES 10 AND 11)

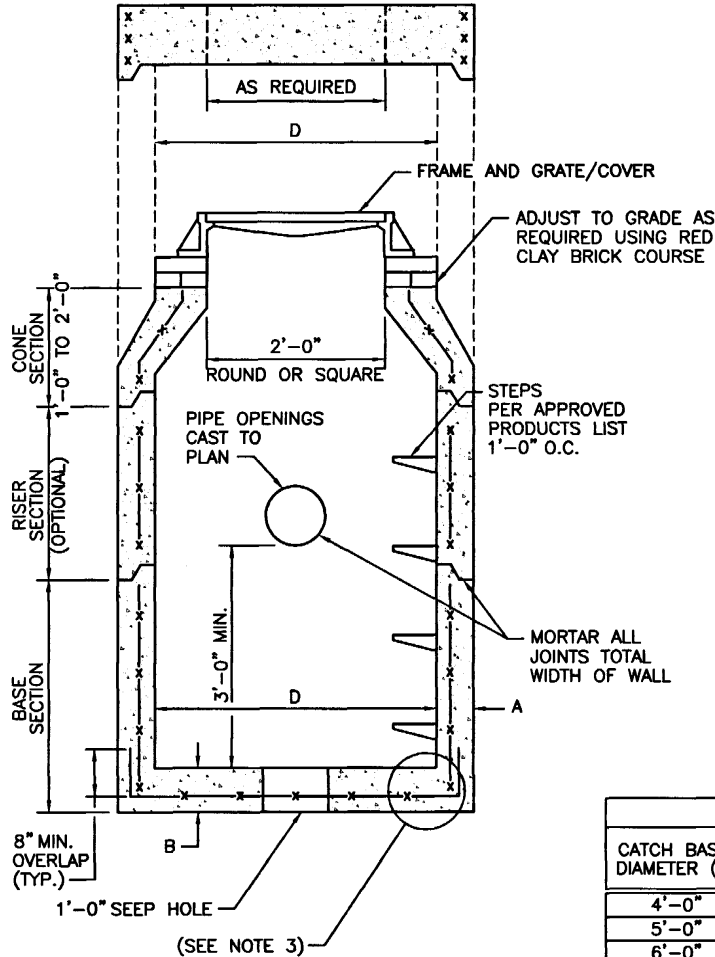
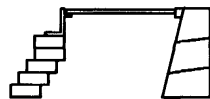


TABLE 1			
CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.

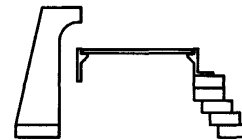
* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2



TYPE "D"



TYPE "R"



TYPE "F"

TYPE CATCH BASIN AS REQUIRED

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

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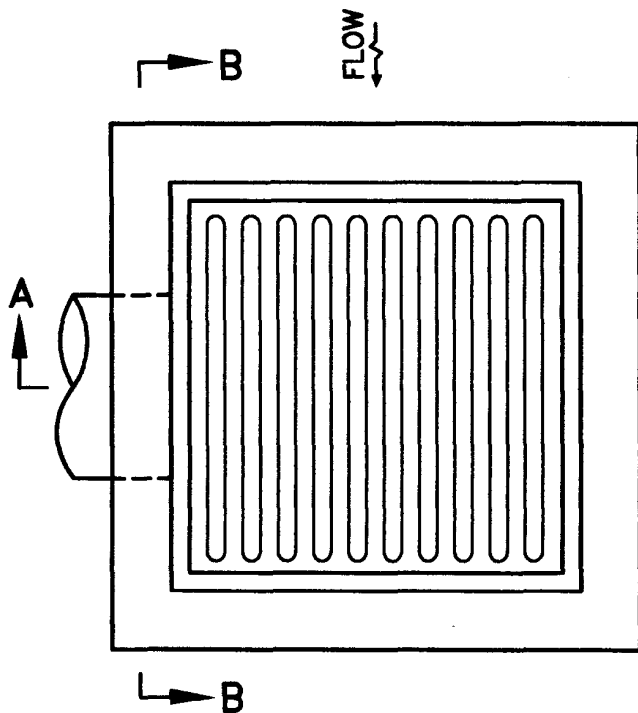
PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN

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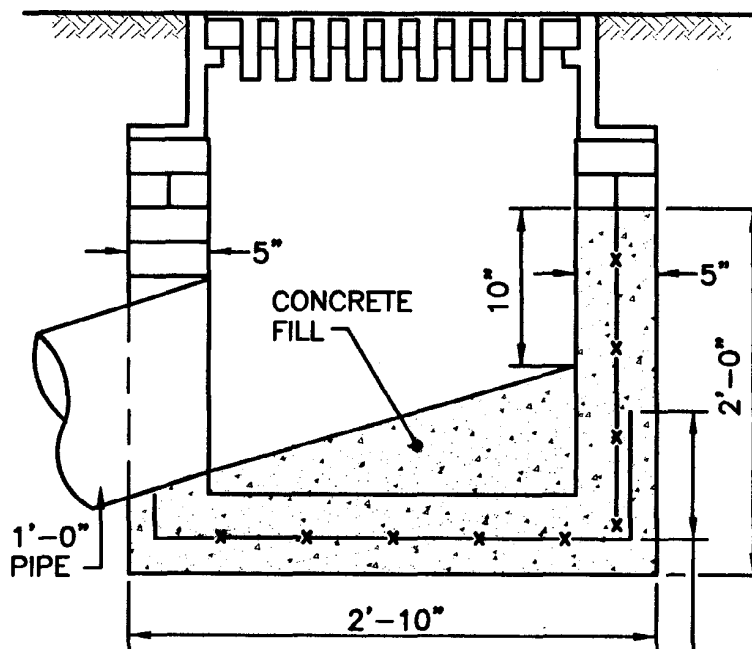


NOTES:

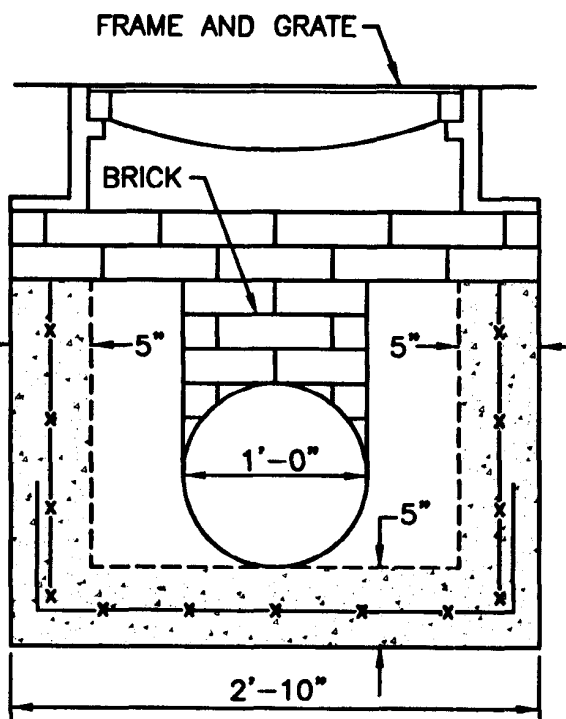
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-36"	3/4"

PLAN



SECTION A-A



SECTION B-B

8" MIN.
OVERLAP (TYP.)

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PRECAST CONCRETE DROP INLET

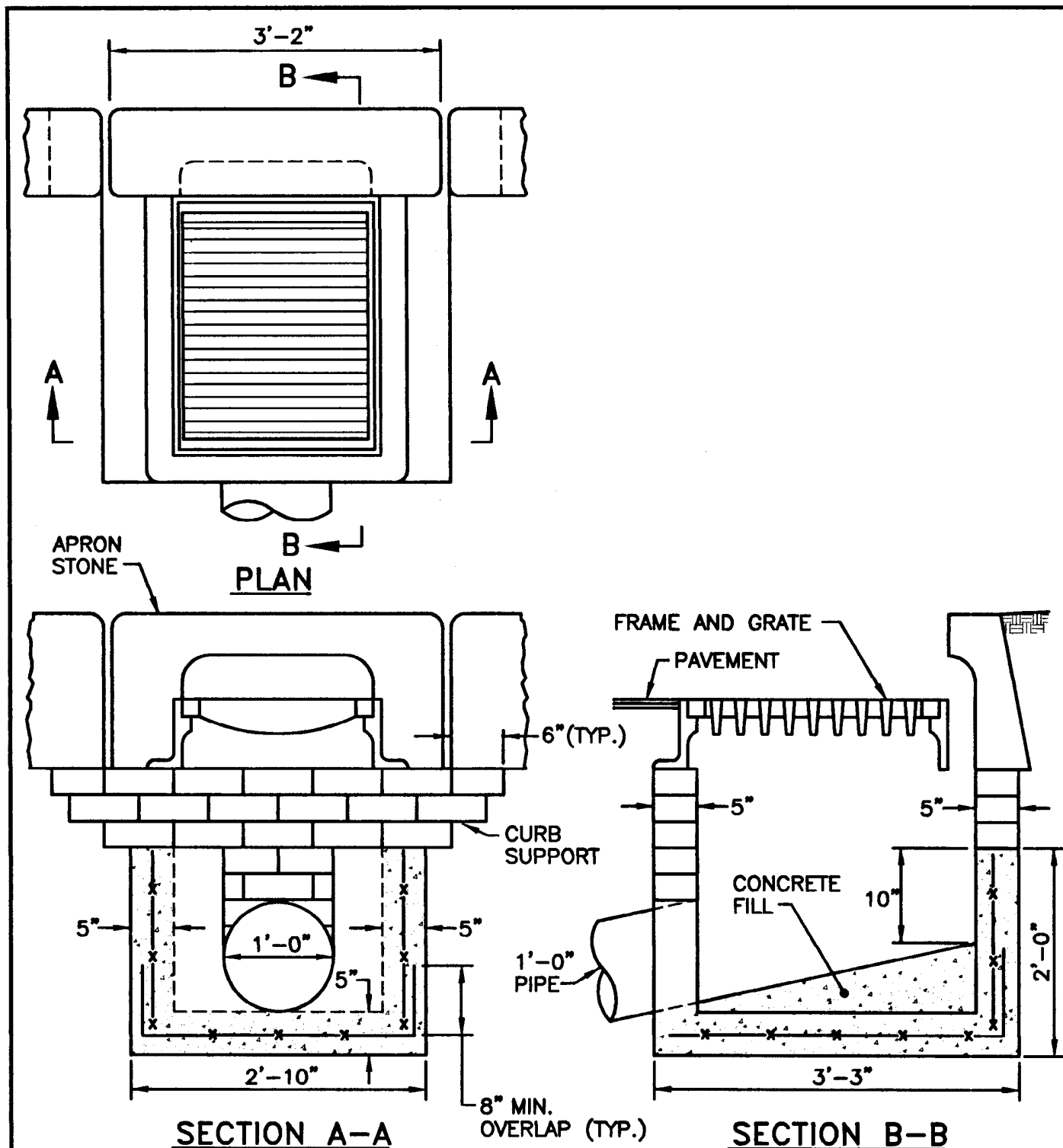
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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

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**PRECAST CONCRETE DROP INLET
LATERAL OUTLET**

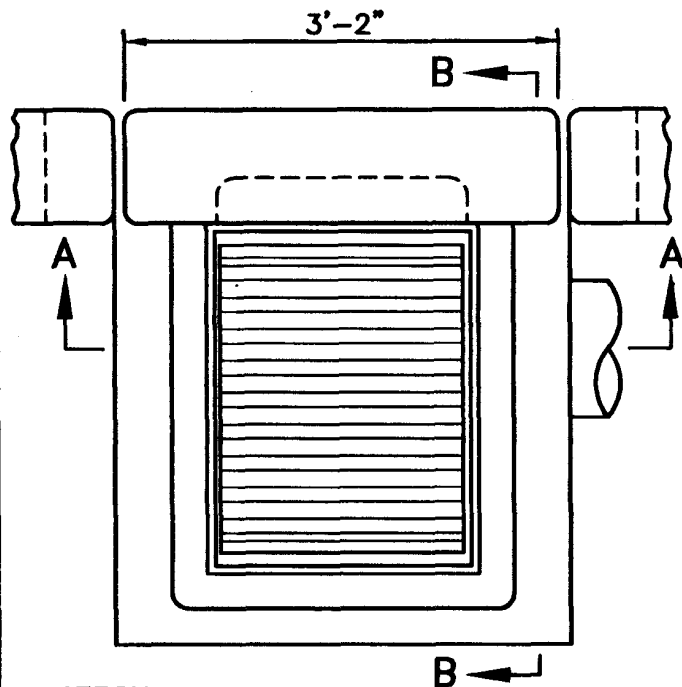
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TRANSPORTATION

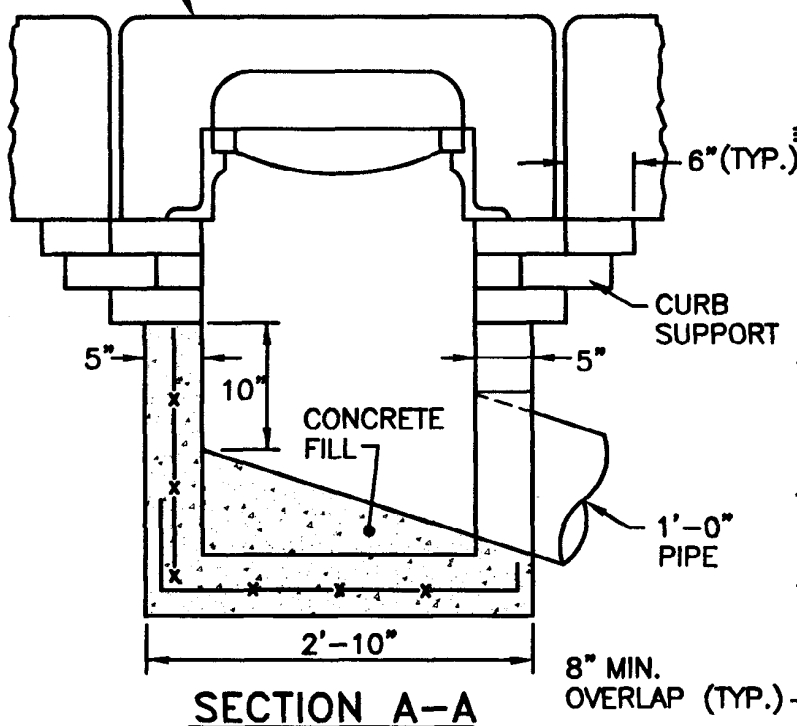
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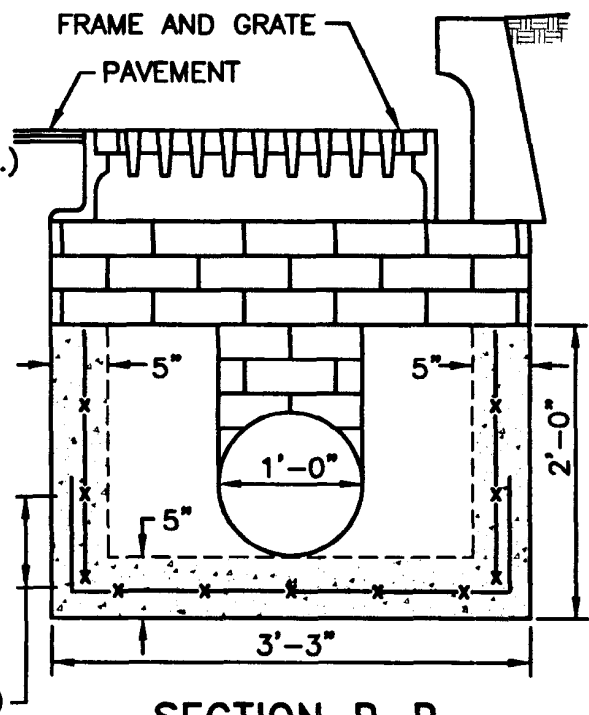


APRON
STONE

PLAN



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

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**PRECAST CONCRETE DROP INLET
LONGITUDINAL OUTLET**

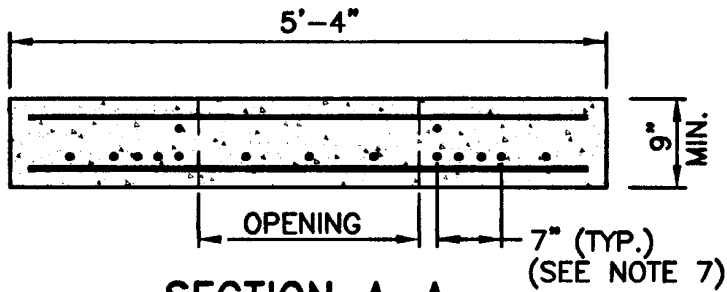
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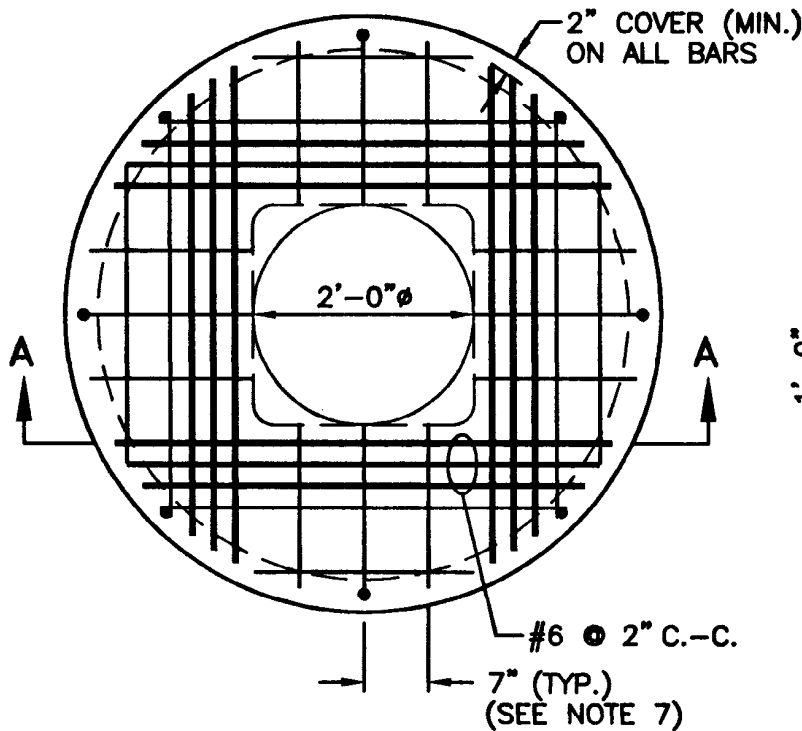
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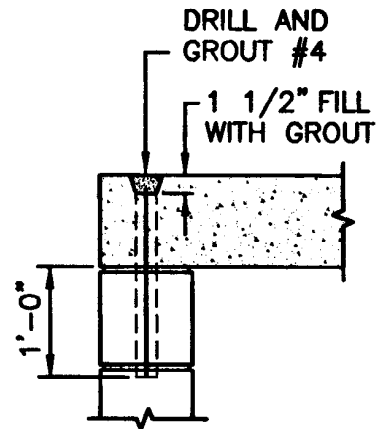




SECTION A-A



PLAN



DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

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**CONCRETE COVER FOR SHALLOW
4'-0" ROUND MANHOLES**

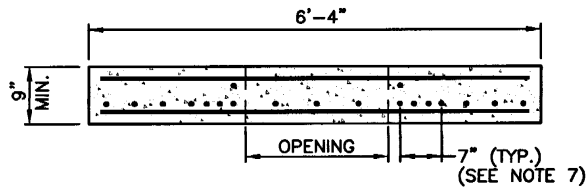
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TRANSPORTATION

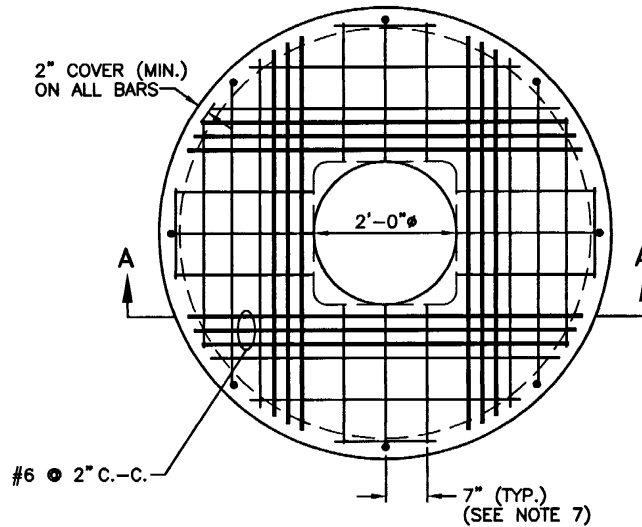
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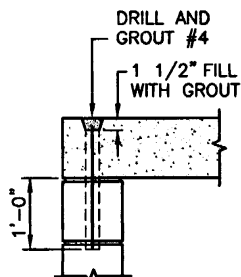




SECTION A-A



PLAN



DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

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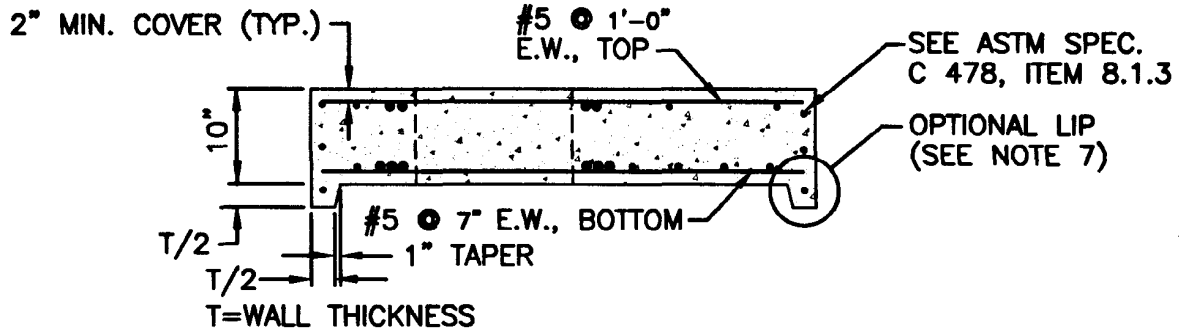
CONCRETE COVER FOR SHALLOW 5'-0" ROUND MANHOLES

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Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

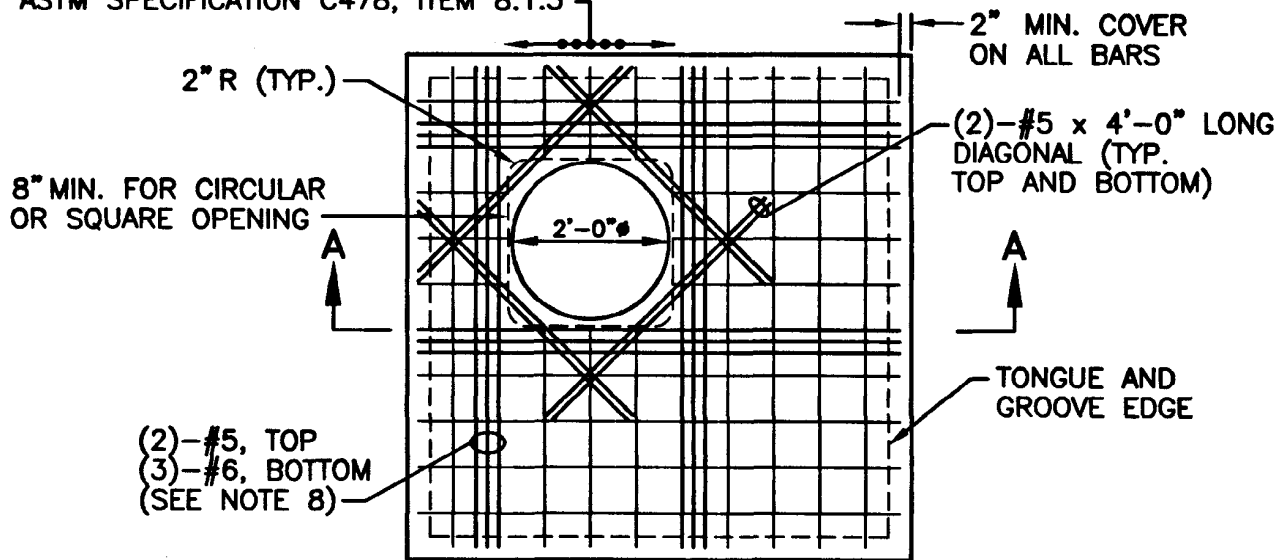
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SECTION A-A

ASTM SPECIFICATION C478, ITEM 8.1.3



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS TOP COVER IS FOR STD. 4.3.0.
3. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
4. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
5. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
6. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
7. WHERE NO LIP IS PROVIDED, THE ASTM SPECIFICATION REFERENCE SHALL BE IGNORED. IN ALL CASES, THE CONTACT SURFACES SHALL MATCH.
8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.
9. FOR DOUBLE GRATE OPENINGS, THE REBARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.

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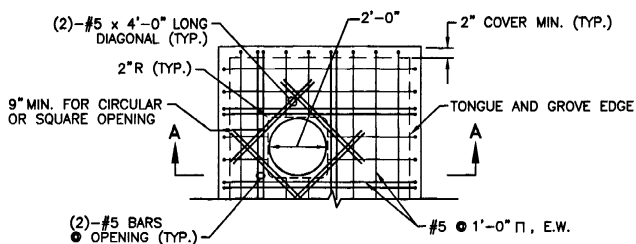
TOP COVER FOR 4'-0" OR 6'-0" SQUARE CATCH BASINS AND MANHOLES

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

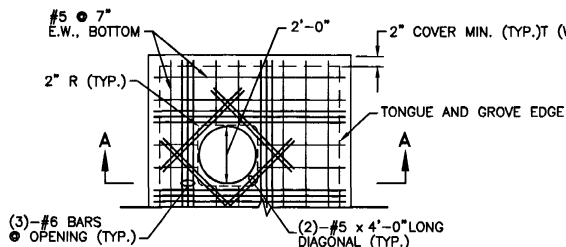
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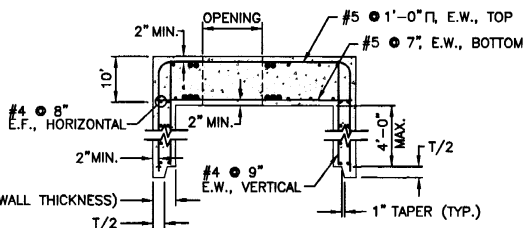
R.I.
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TOP MAT



BOTTOM MAT



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
4. TOP SLAB MONOLITHIC WITH RISER SECTION HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADING WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SECTION IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBARS ARE TO HAVE A 2" MINIMUM CLEARANCE FROM OPENING.
6. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'-6".
7. WALL WIDTHS MUST BE EQUIVALENT TO THOSE OF THE BASE SECTION.
8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7" BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 (SHOWN WITH HEAVIER LINES FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0" BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.
9. FOR DOUBLE GRATE OPENINGS, THE REINFORCING BARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.

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TOP COVER MONOLITHIC WITH RISER SECTION
FOR 4'-0" OR 6'-0" SQUARE CATCH BASINS AND MANHOLES

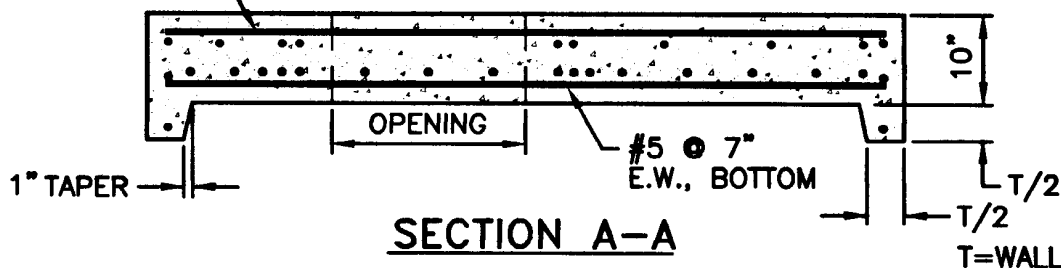
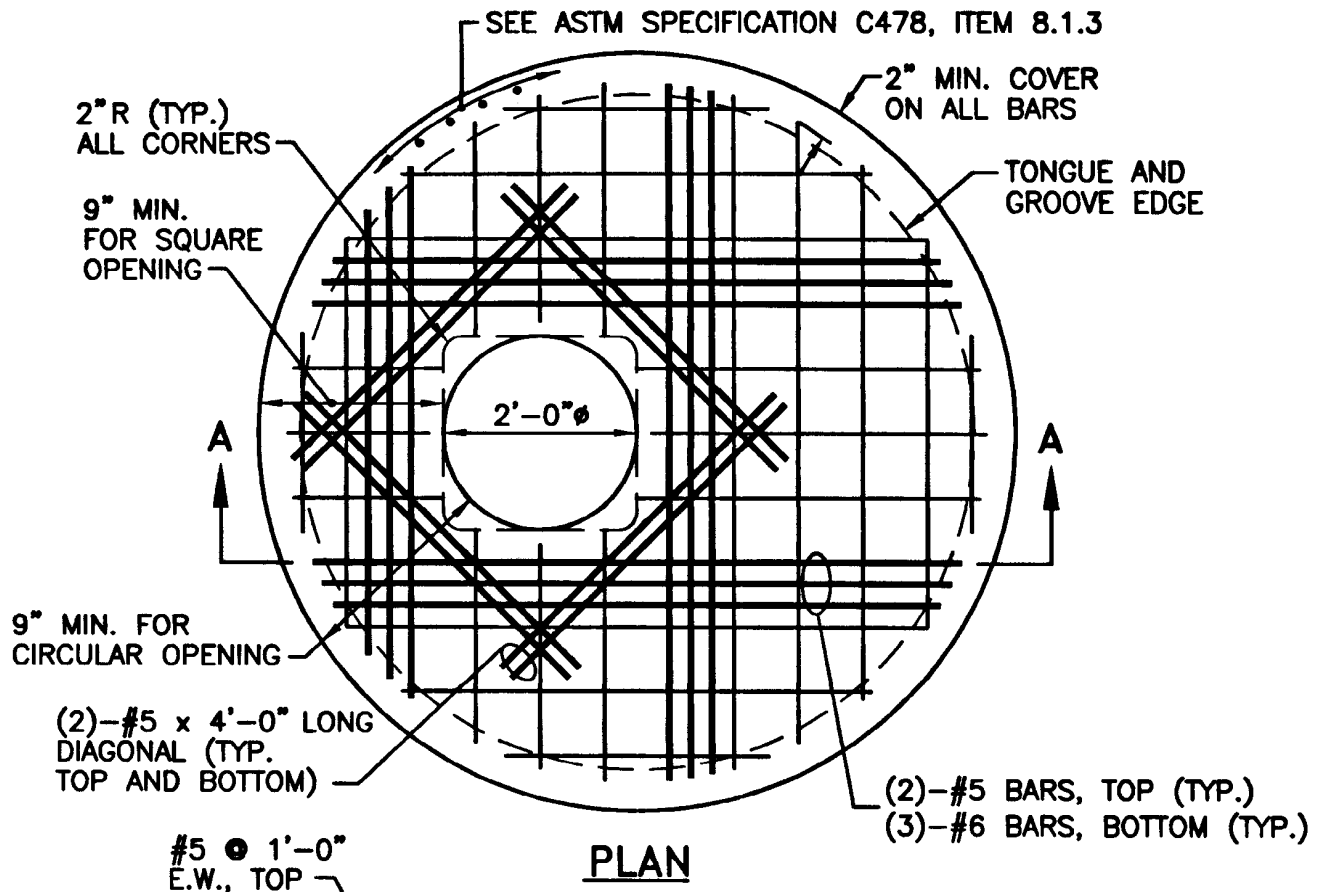
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4.7.1

JUNE 15, 1998
DATE DATE

John J. Gagliardi
DESIGNED BY
TRANSPORTATION

John J. Gagliardi
CHECKED BY
TRANSPORTATION

REVISIONS		DATE
NO.	BY	DATE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTER LINE OF THE OPENING MUST BE WITHIN 2" FROM THE STEPS.
4. ALTERNATE TOP COVER IS STEEL REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBAR SHALL HAVE A MINIMUM OF 2" CLEARANCE FROM OPENING.
6. ALL REBARS IN THE BOTTOM MAT ARE #5 ϕ 2", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 SHOWN WITH A HEAVIER LINE FOR CLARITY. REBARS IN THE TOP MAT ARE #5 ϕ 1'-0", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

ALTERNATE TOP COVER FOR ROUND PRECAST MANHOLES AND CATCH BASINS

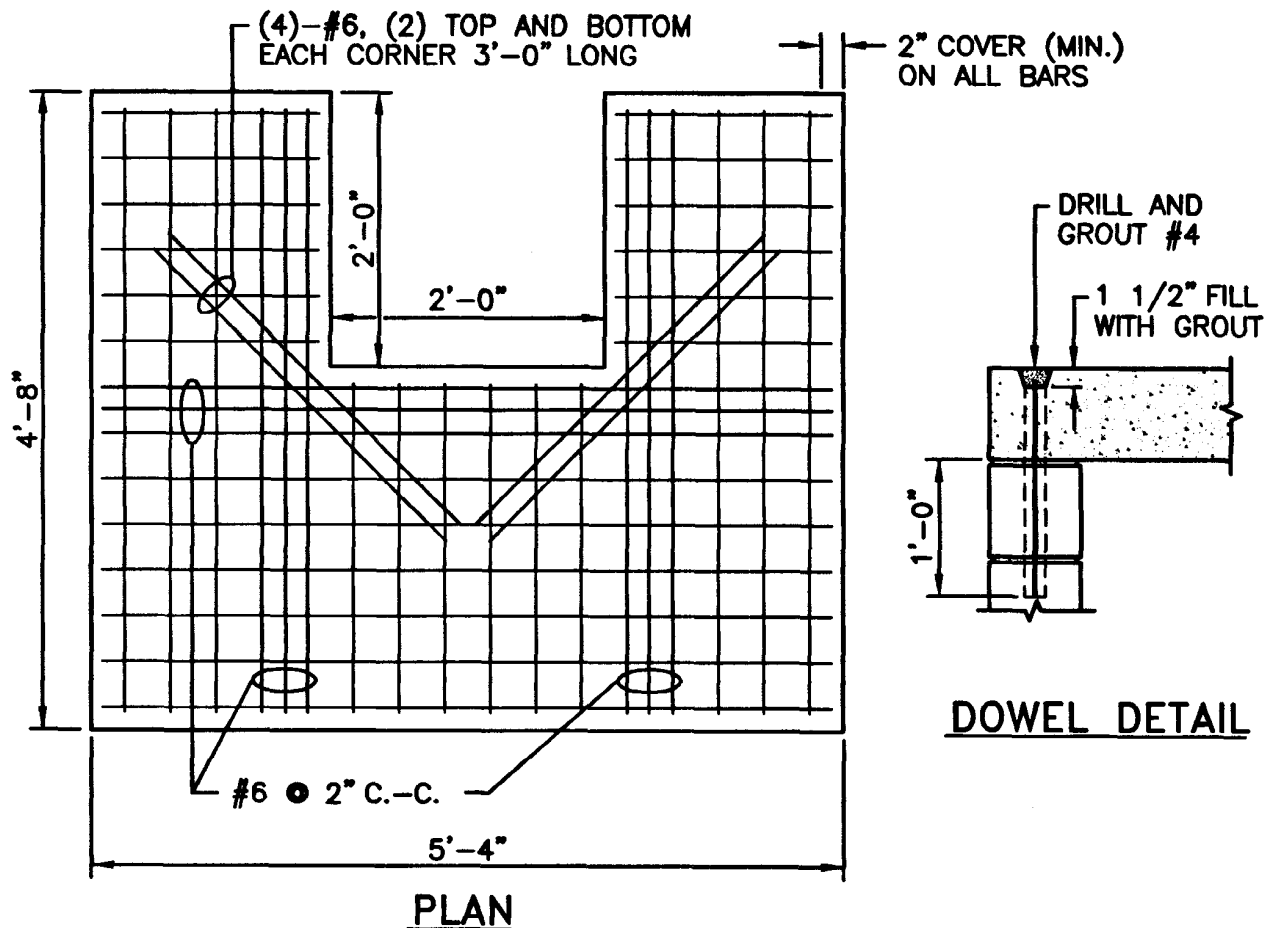
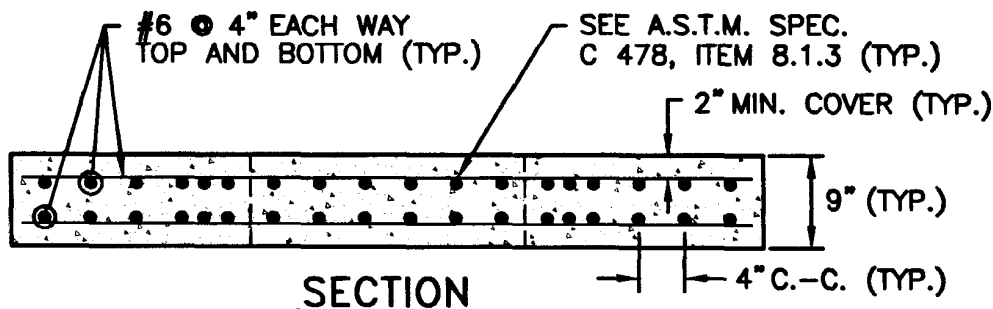
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
4.7.2



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARENCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

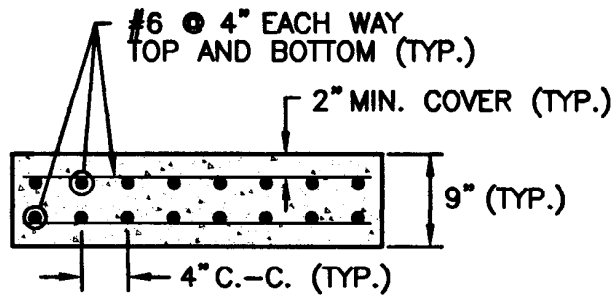
**CONCRETE COVER FOR SHALLOW
TYPE "F" SQUARE CATCH BASINS**

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

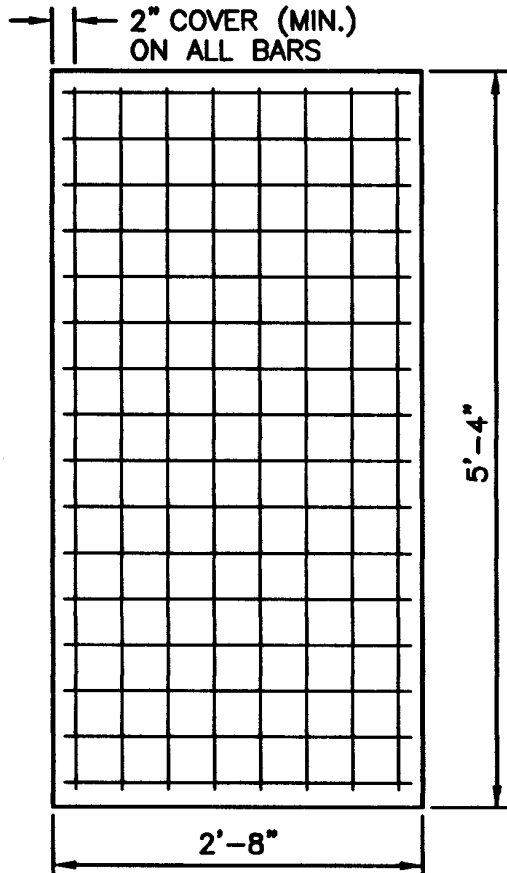
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

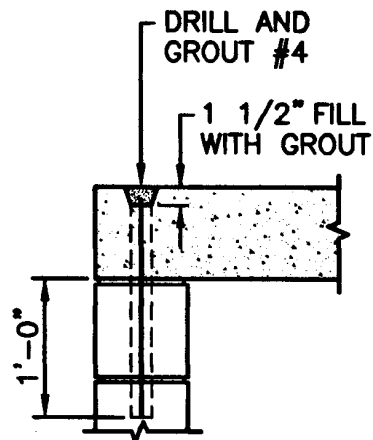




SECTION



PLAN





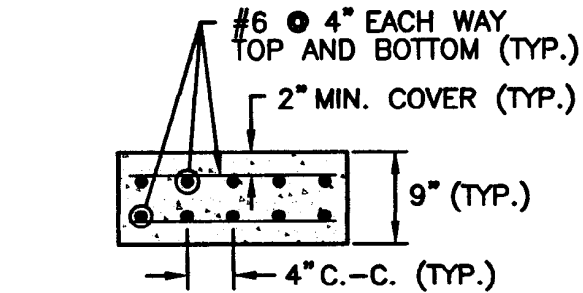
DOWEL DETAIL

NOTES:

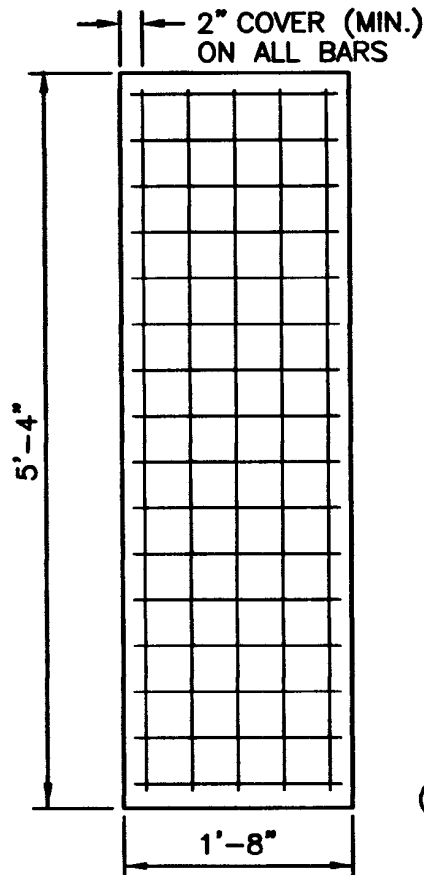
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

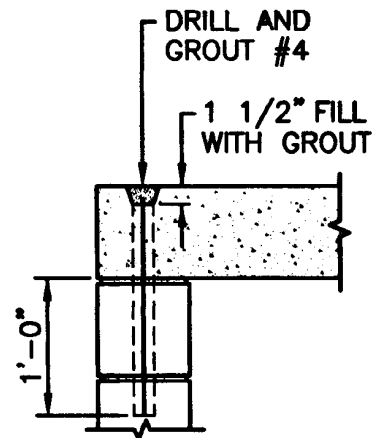
REVISIONS			CONCRETE COVER FOR SHALLOW DOUBLE GRATE CATCH BASINS WITH CURB	<div><div>R.I. STANDARD 4.8.1</div></div>
NO.	BY	DATE		
			<div><div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div></div>	



SECTION



PLAN



DOWEL DETAIL

(TWO REQUIRED FOR EACH CATCH BASIN)

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

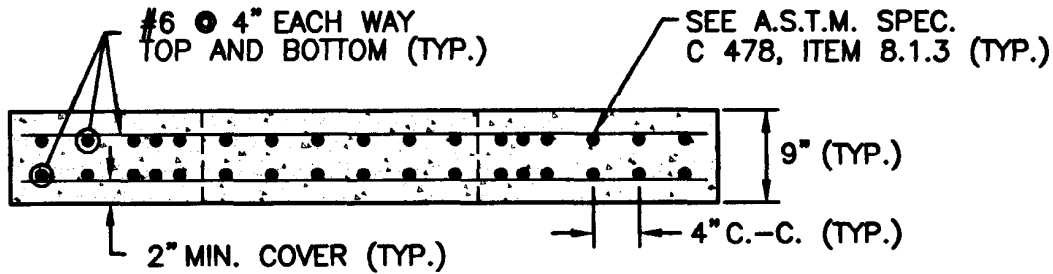
**CONCRETE COVER FOR SHALLOW DOUBLE
GRATE CATCH BASINS WITHOUT CURB**

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

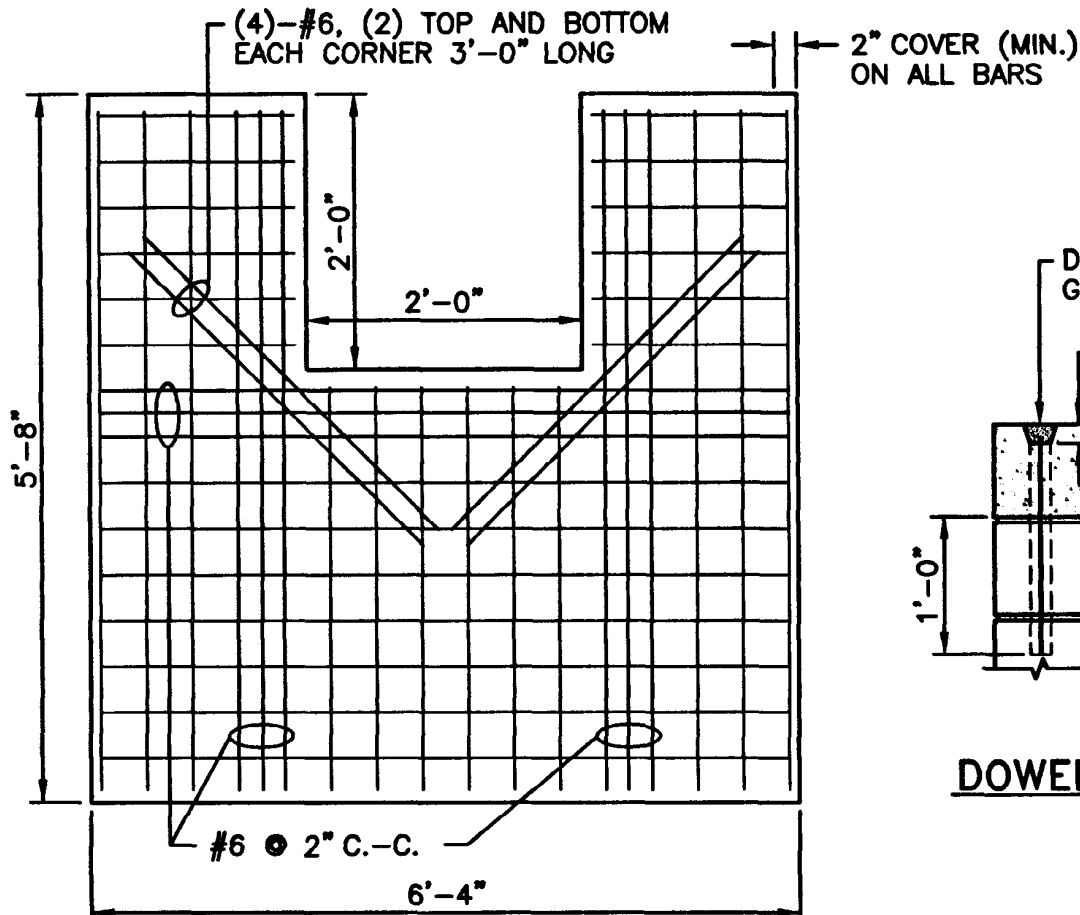
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

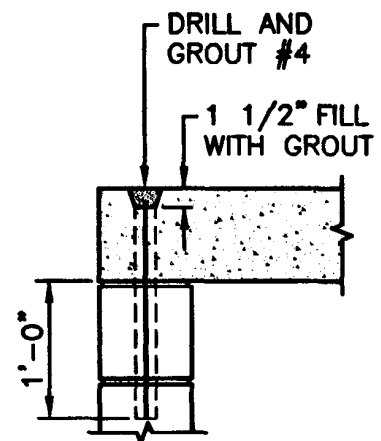




SECTION



PLAN



DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS NO GREATER THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE COVER FOR SHALLOW 5'-0" SQUARE CATCH BASINS

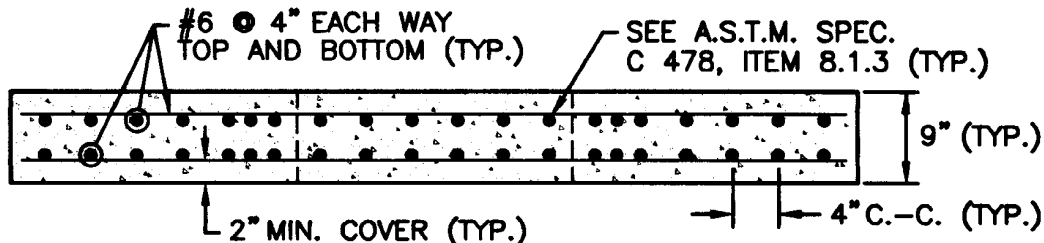
REVISIONS		
NO.	BY	DATE

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

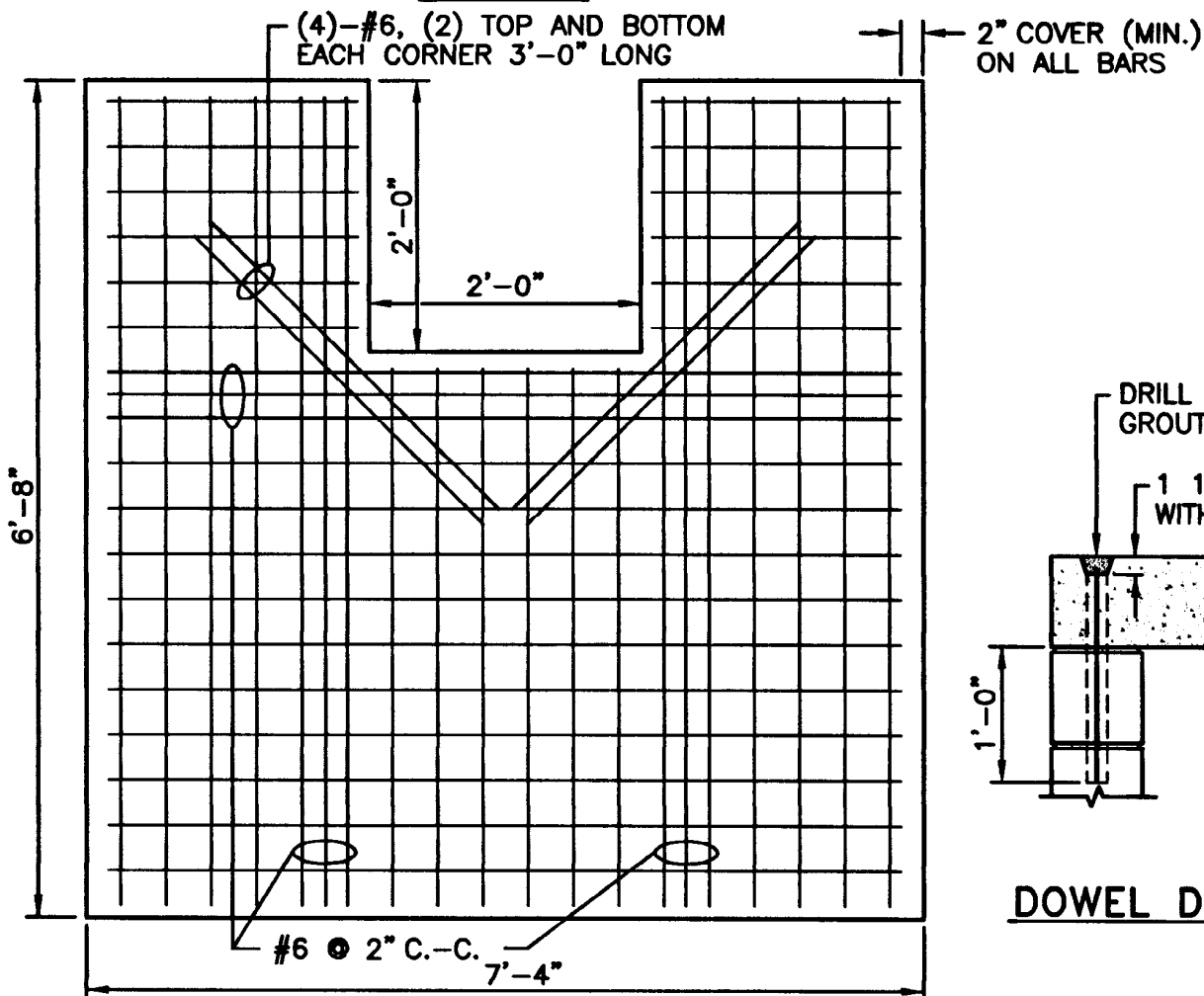
Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

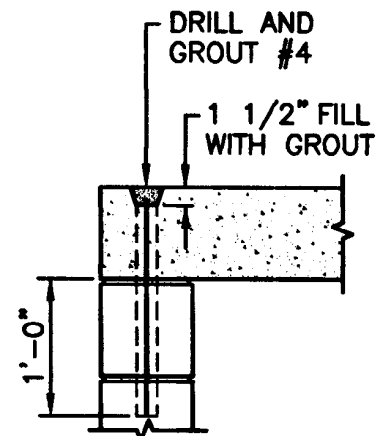
R.I.
STANDARD
4.8.3



SECTION



PLAN



DOWEL DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE COVER FOR SHALLOW 6'-0" SQUARE CATCH BASINS

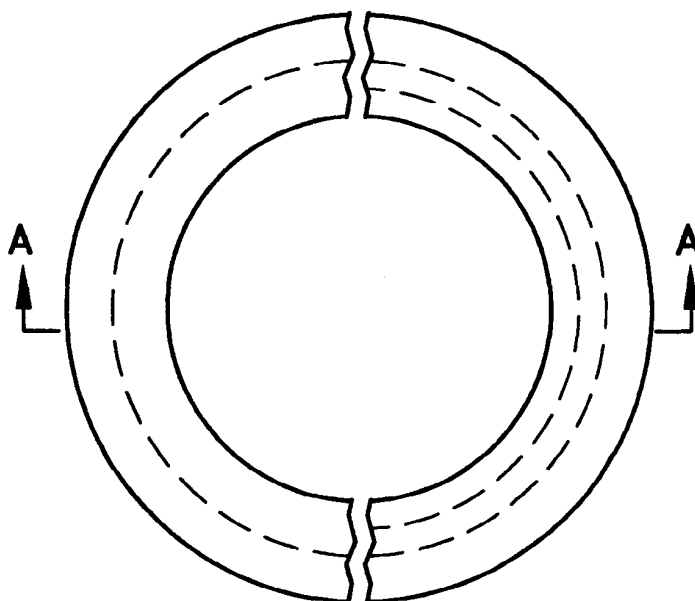
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

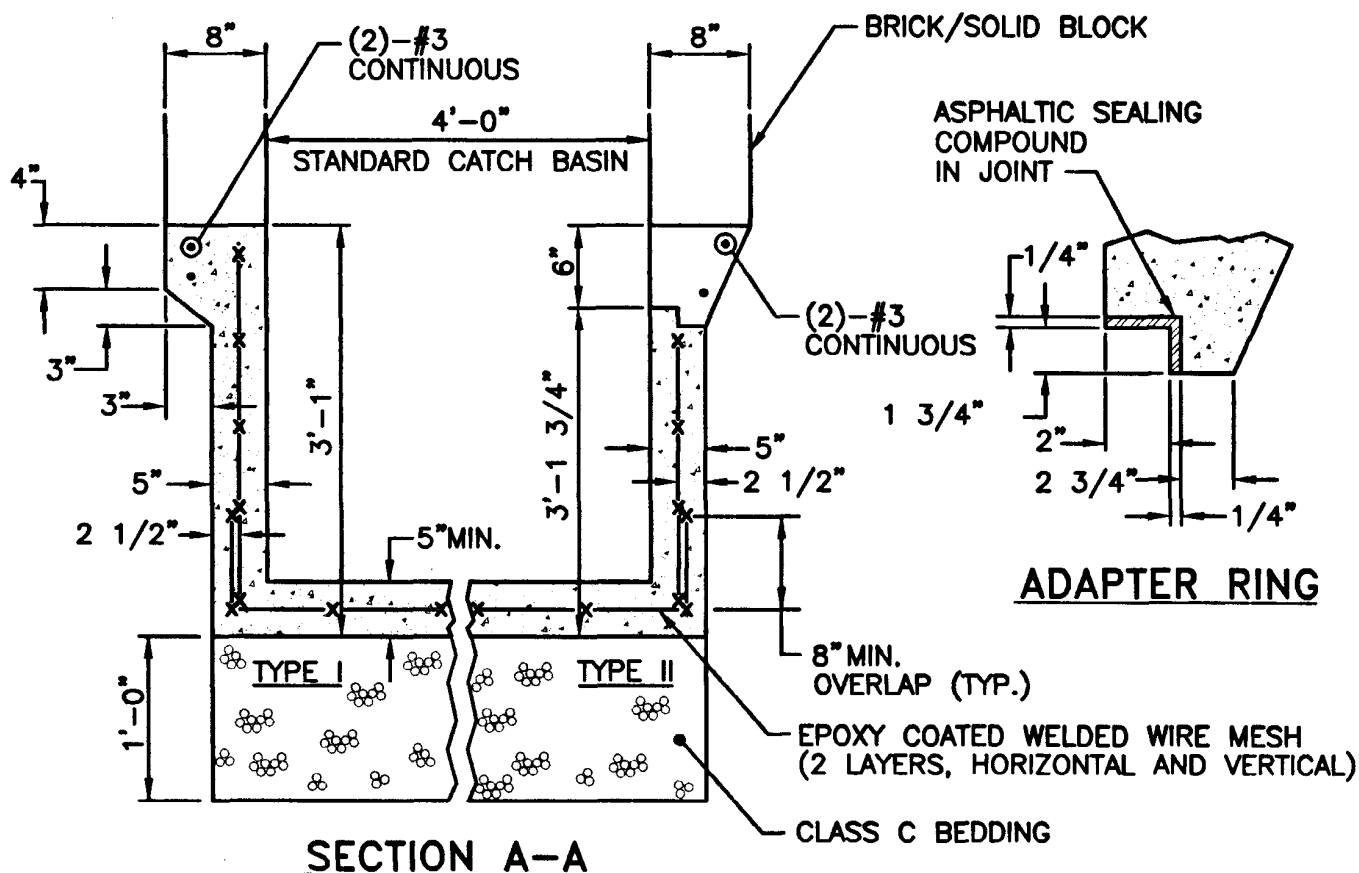




PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. EITHER TYPE I OR TYPE II MAY BE USED AT THE DISCRETION OF THE ENGINEER.
3. REINFORCING TO BE 4x4-W4.0 xW4.0 WELDED WIRE MESH, 2 LAYERS, HORIZONTAL AND VERTICAL (EPOXY COATED).



SECTION A-A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

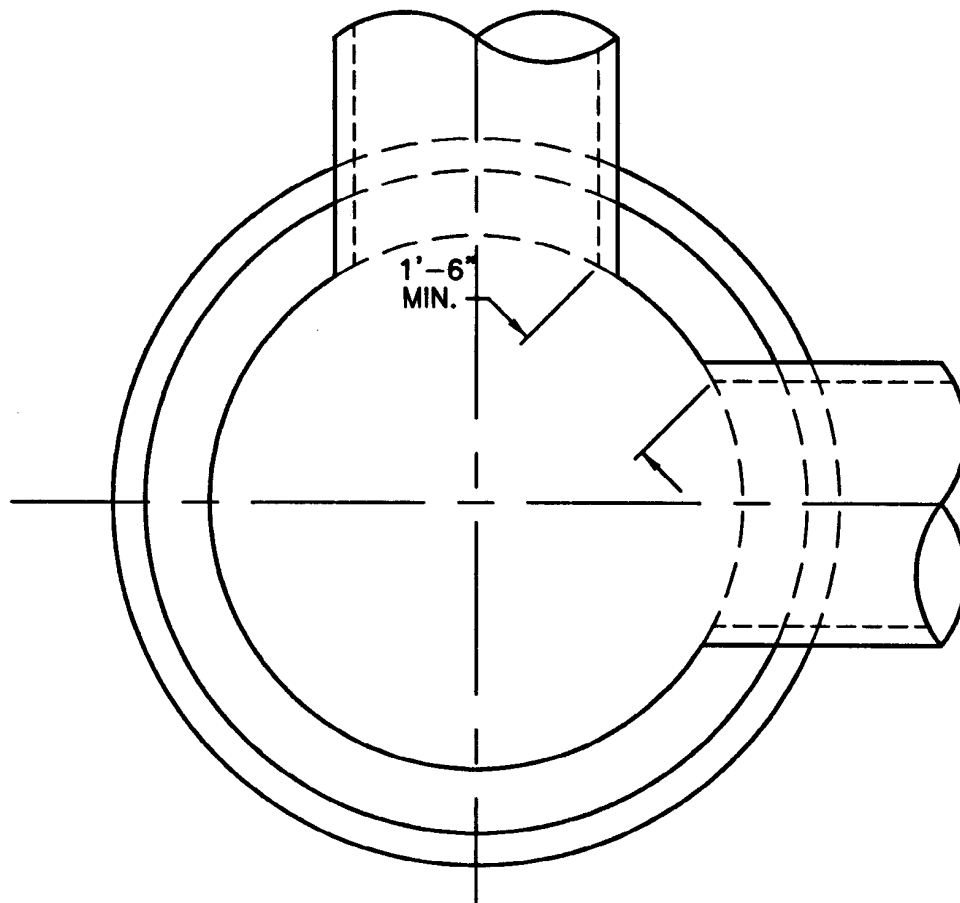
**PRECAST CONCRETE SUMP FOR
ROUND CATCH BASINS (WET AREAS)**

John A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE








CROSS SECTION OF MANHOLE OR CATCH BASIN

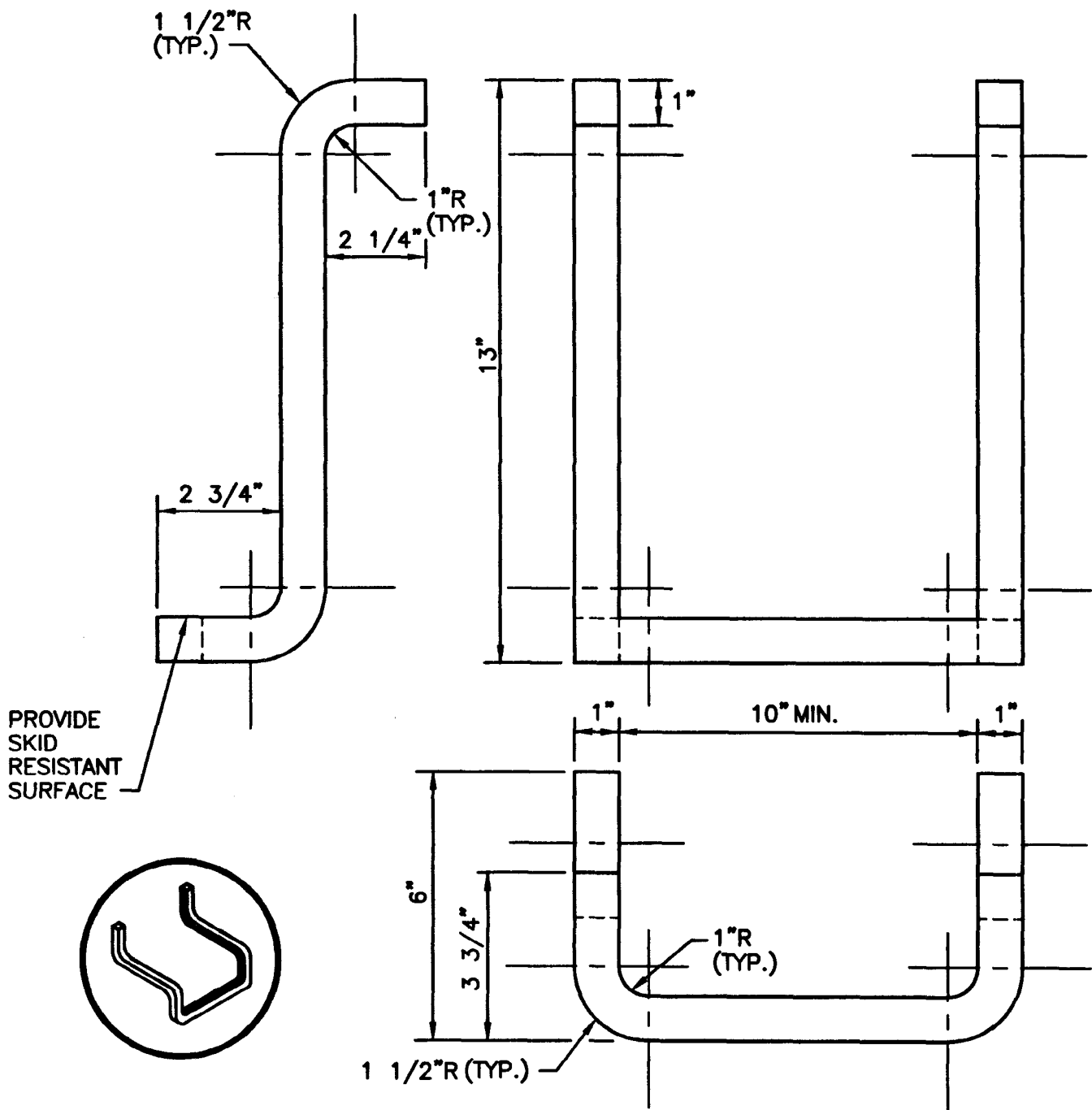
	4 FT. MANHOLE OR CATCH BASIN	5 FT. MANHOLE OR CATCH BASIN	6 FT. MANHOLE OR CATCH BASIN
MAX. PIPE O.D. STRAIGHT THRU TO 45° DEFLECTION	33 1/2" O.D. 27" R.C. PIPE	44" O.D. 36" R.C. PIPE	51" O.D. 42" R.C. PIPE
MAX. PIPE O.D. 90° DEFLECTION	23" O.D. 18" R.C. PIPE	33 1/2" O.D. 27" R.C. PIPE	37" O.D. 30" R.C. PIPE

NOTE:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE MINIMUM DISTANCE BETWEEN PIPES ENTERING MANHOLES AND CATCH BASINS MUST BE 1'-6". THE SIZE OF THE CATCH BASIN WILL BE DETERMINED BY THE PIPE SIZE AND ENTRY ANGLE. (SEE TABLE ABOVE.)

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			ROUND MANHOLES AND CATCH BASINS MAXIMUM PIPE SIZE STANDARD	
NO.	BY	DATE		
			 <small>CHIEF ENGINEER TRANSPORTATION</small>	 <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small>
			JUNE 15, 1998 <small>ISSUE DATE</small>	



NOTES:

1. STEPS SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. CROSS SECTION AREA MAY BE REDUCED UPON SUBMISSION OF CERTIFIED LOAD TESTS. STEPS MUST SUPPORT 300 LBS.
3. STOCK SHOWN IS 1" SQUARE WHICH MAY BE REPLACED BY 1" DIAMETER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

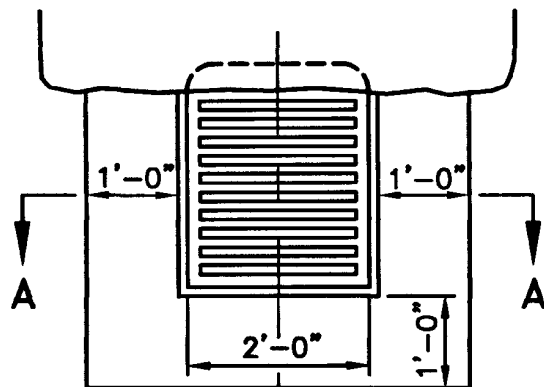
CATCH BASIN AND MANHOLE STEP

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

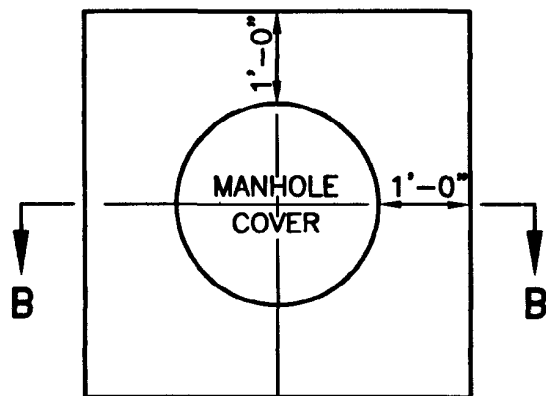
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

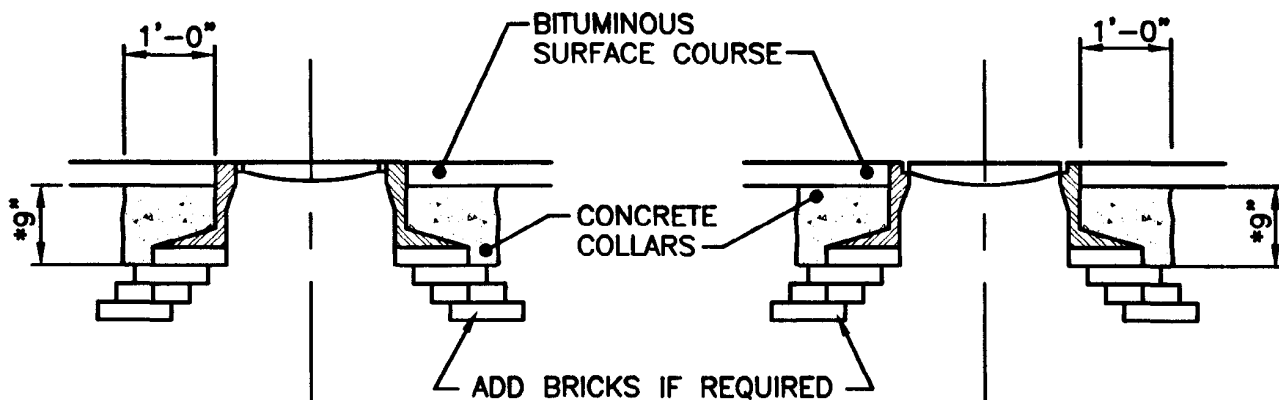




PLAN



PLAN



SECTION A-A
CATCH BASINS

SECTION B-B
MANHOLE COVERS

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. COLLARS TO BE CONCRETE MASONRY AS DIRECTED.
- *3. 9" OF CONCRETE IN BITUMINOUS PAVED AREAS. MEET EXISTING CONCRETE IN PORTLAND CEMENT CONCRETE AREAS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

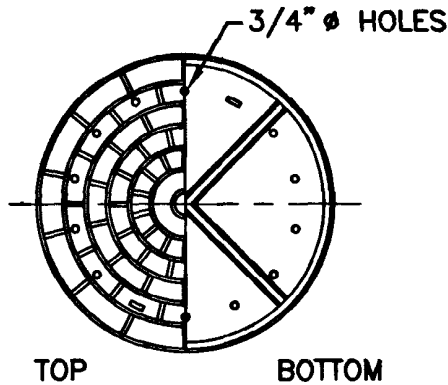
CONCRETE COLLARS

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

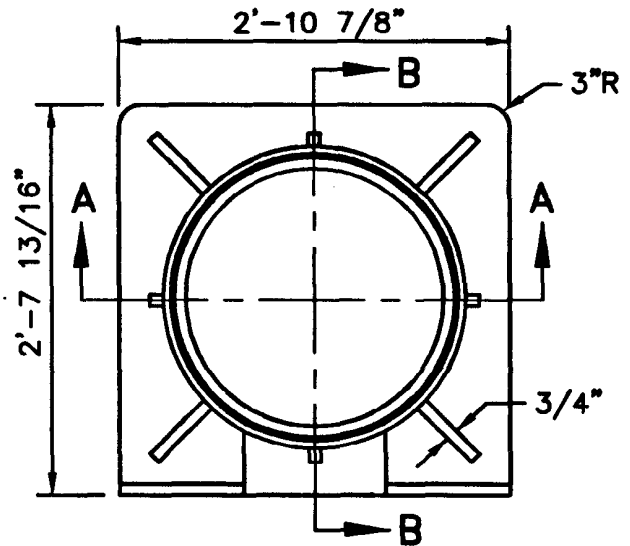
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

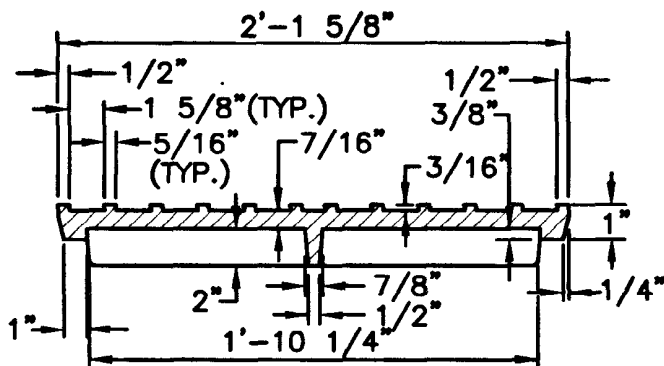




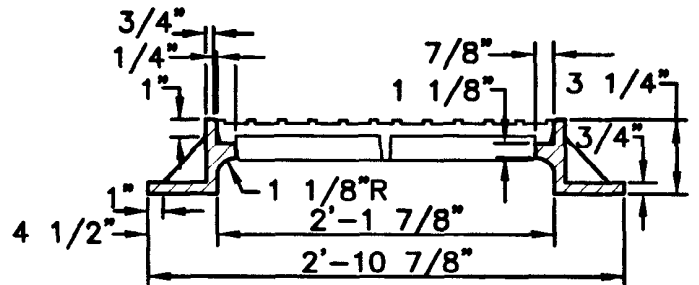
COVER



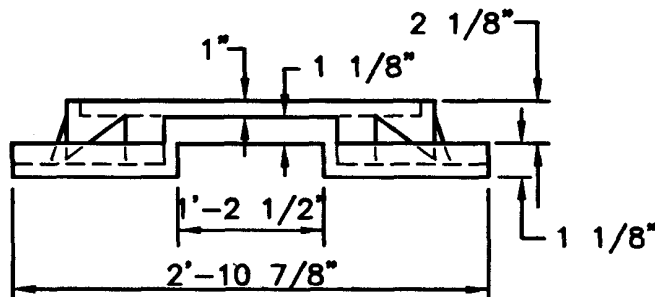
FRAME



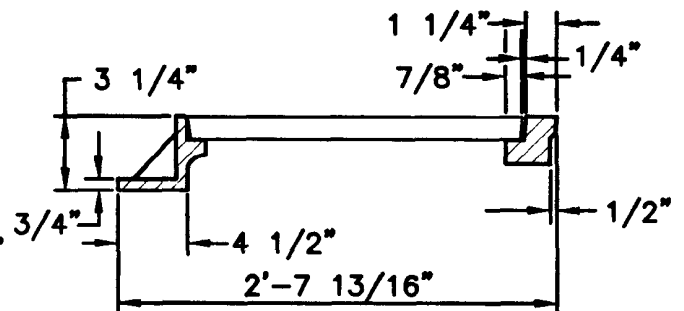
FRONT ELEVATION



SECTION A-A



FRONT ELEVATION



SECTION B-B

NOTES:

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

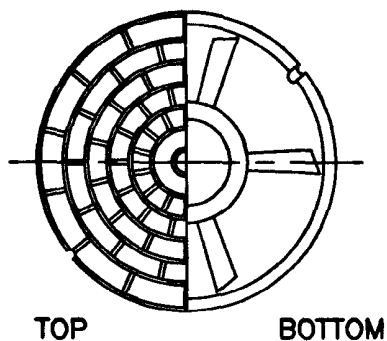
LIGHT-DUTY
SQUARE FRAME AND ROUND COVER

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

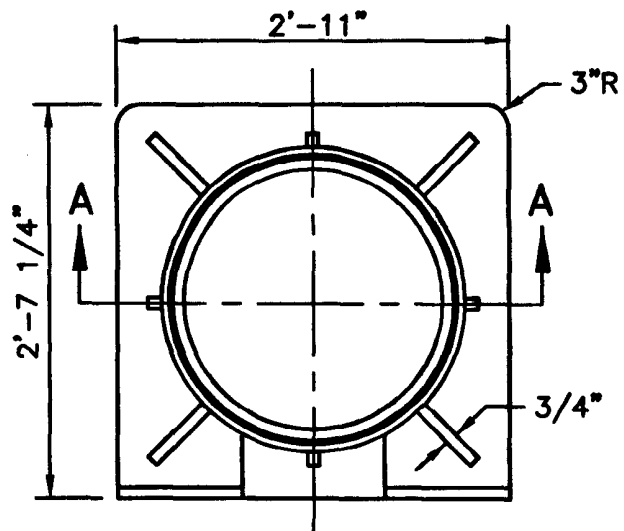
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

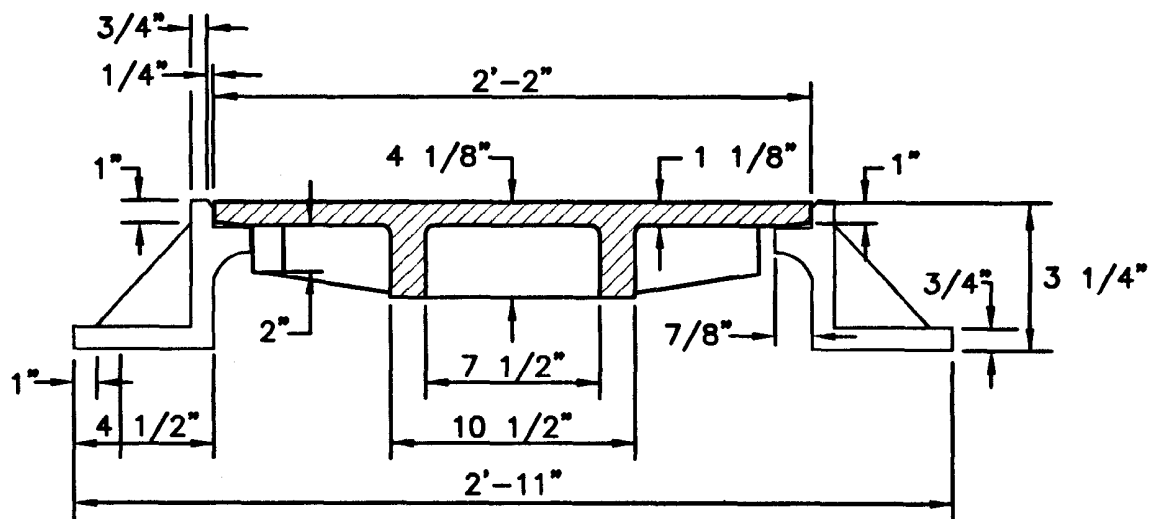




COVER



FRAME



SECTION A-A

NOTES:

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

**HEAVY-DUTY
SQUARE FRAME AND ROUND COVER**

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





FRAME



Technical drawing of a mechanical component, likely a pump housing or manifold, showing a cross-section with various dimensions. The drawing includes a central cylindrical section with internal features, flanked by mounting flanges. Dimensions are given in inches and feet-inches. Key dimensions include: overall length 27 3/8", flange thickness 3/4", internal features 1/8" and 7/8", mounting flange thickness 1", internal height 1", overall height 6", flange width 3/4", base width 4 1/2", and base length 2'-1 7/8".

NOTE:

NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

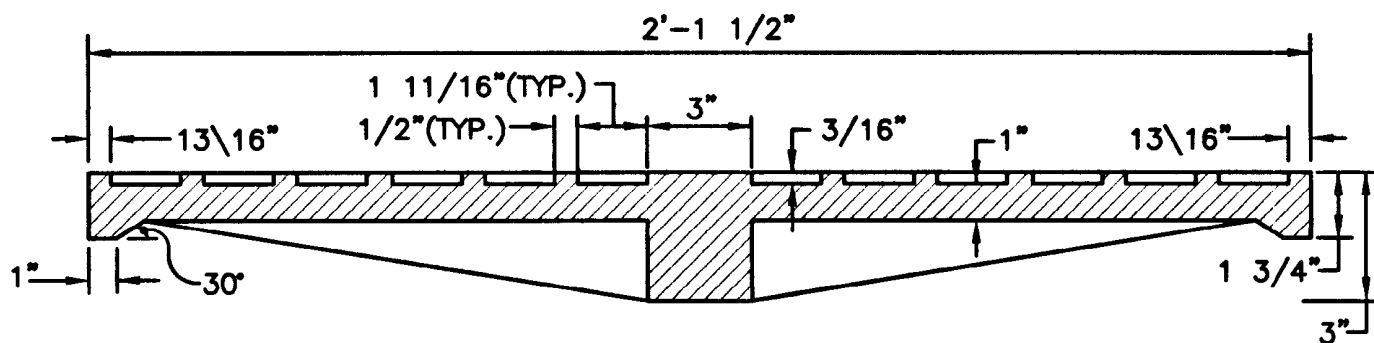
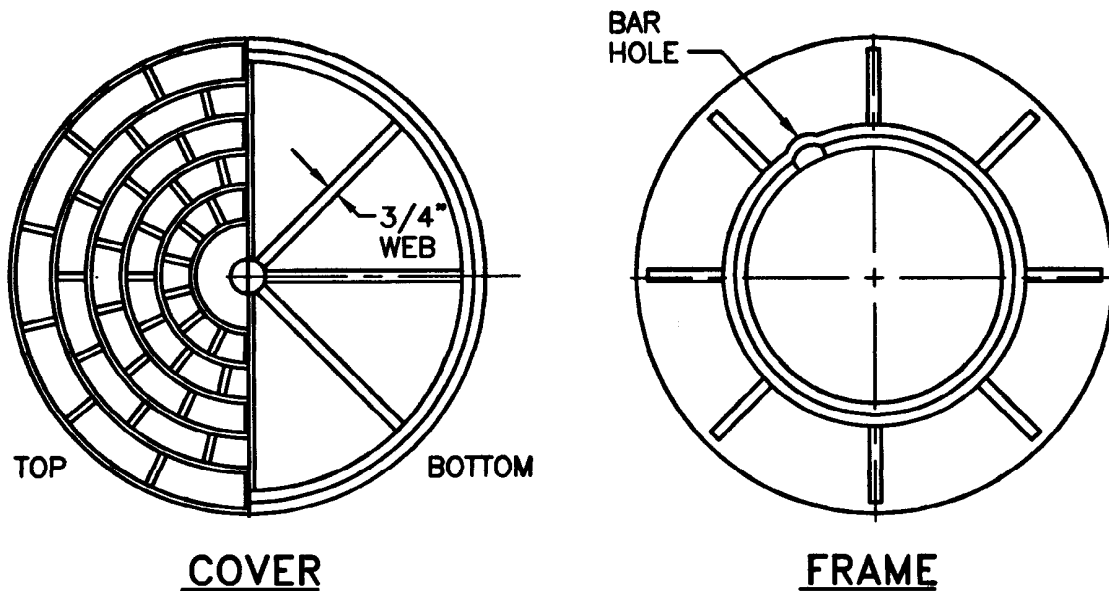
ROUND FRAME AND COVER LIGHT-DUTY

James H. Gault
CHIEF ENGINEER
TRANSPORTATION

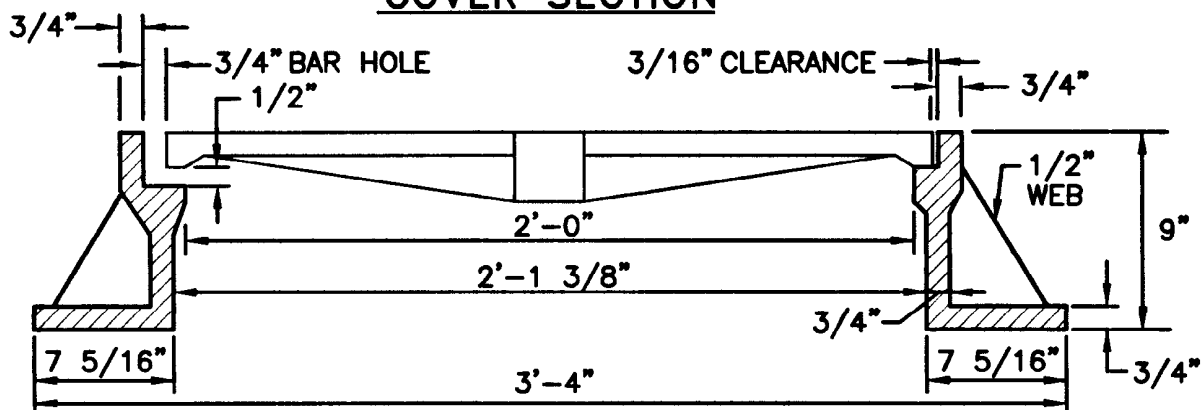
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

**R.I.
STANDARD
6.2.0**



COVER SECTION



FRAME SECTION

NOTES:

1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

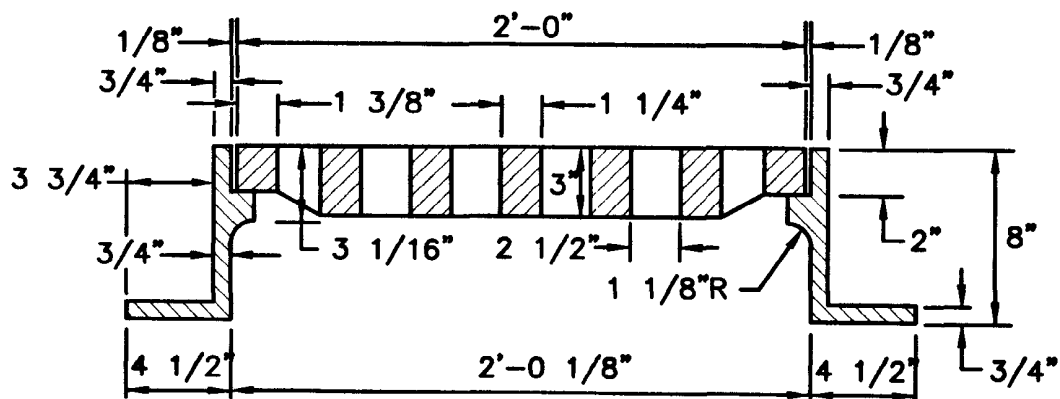
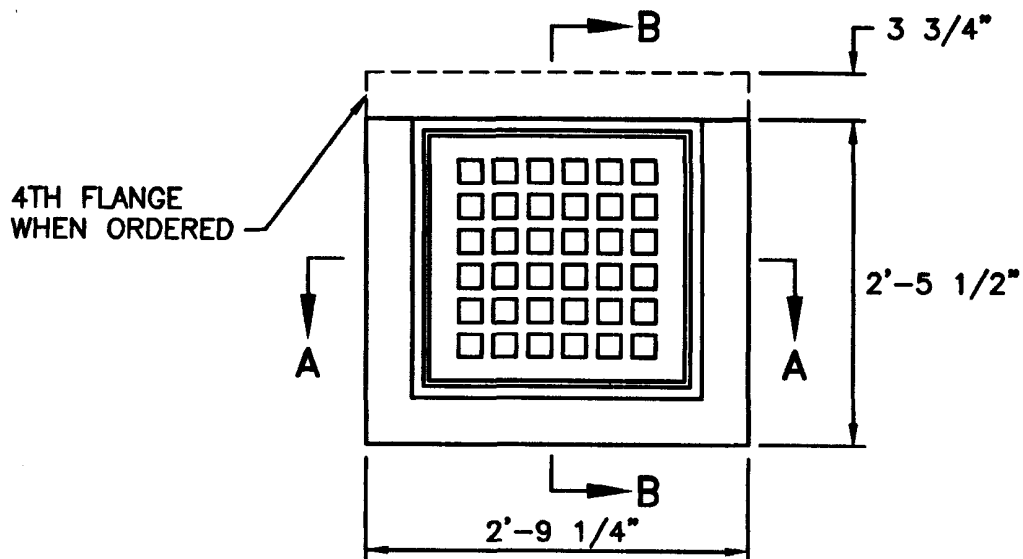
**HEAVY-DUTY
ROUND FRAME AND COVER**

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

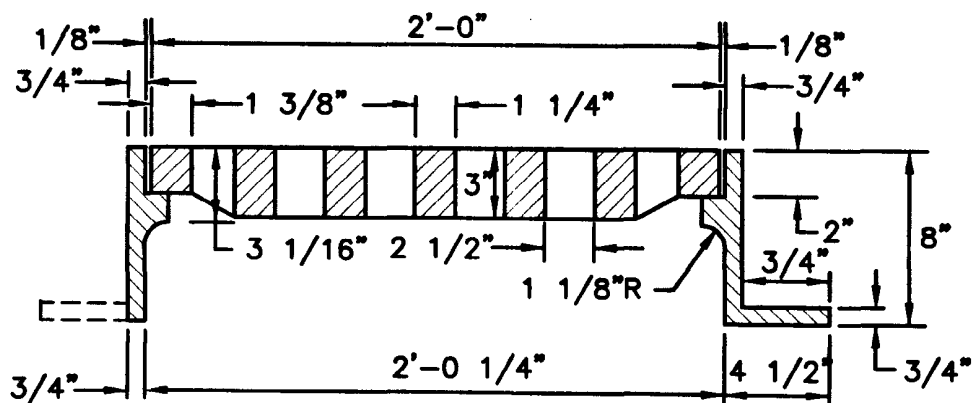
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





SECTION A-A



SECTION B-B

NOTE:

FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SQUARE FRAME AND GRATE

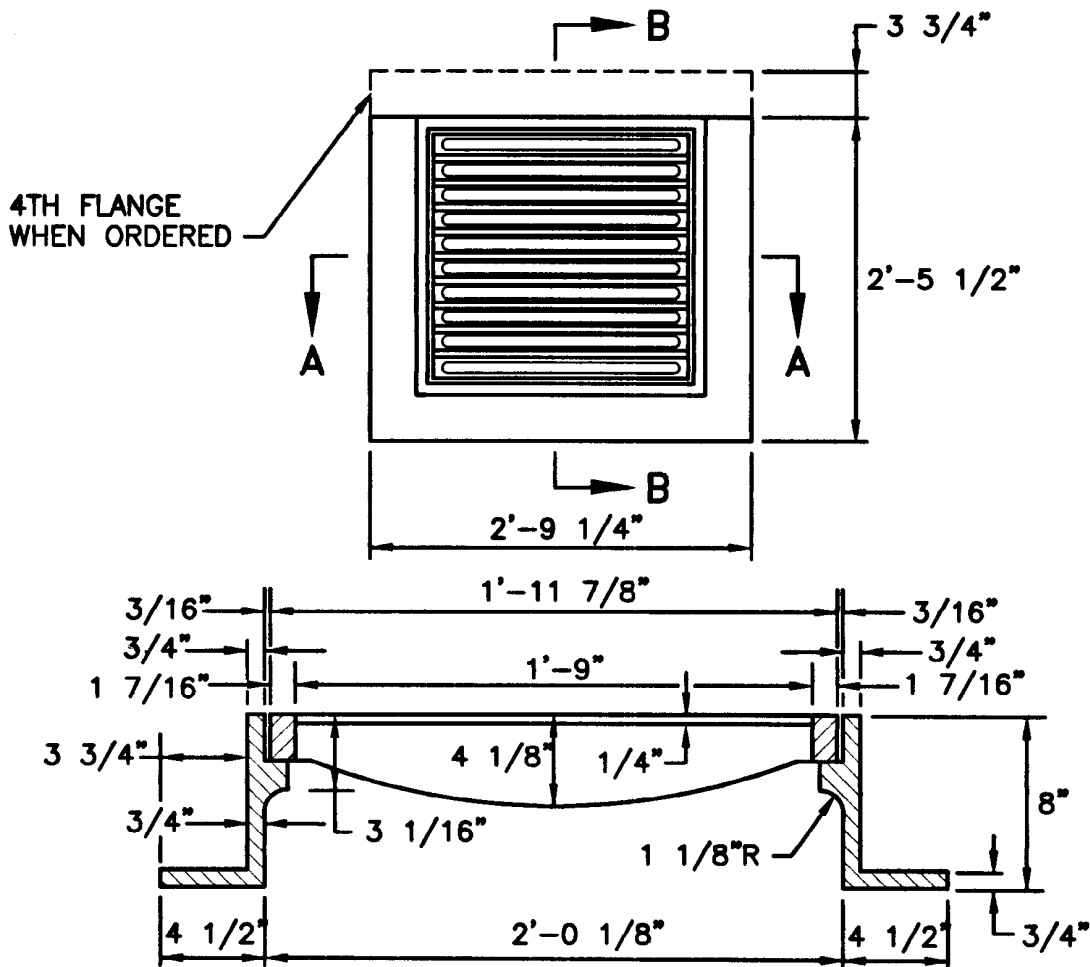
REVISIONS		
NO.	BY	DATE

James A. Casella
CHIEF ENGINEER
TRANSPORTATION

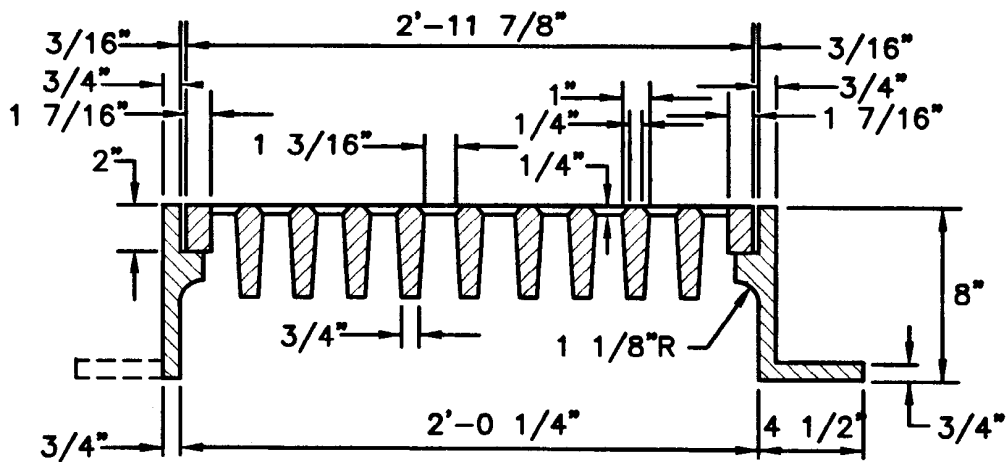
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





SECTION A-A



SECTION B-B

NOTE:

FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SQUARE FRAME AND GRATE

REVISIONS		
NO.	BY	DATE

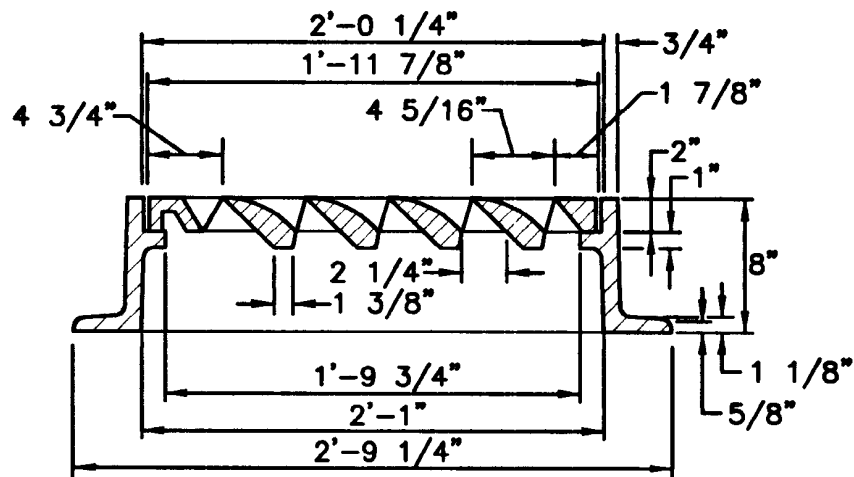
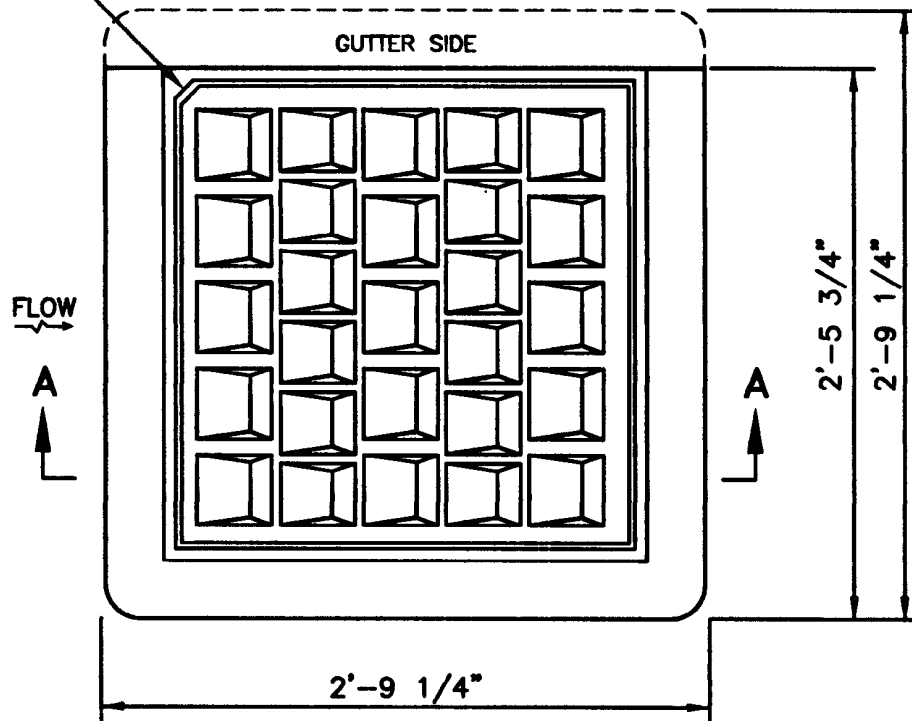
James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
6.3.1

(SEE NOTE 2)



SECTION A-A

NOTES:

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS CORNER LEFT FOR "LEFT" GRATE, DIAGONALLY OPPOSITE CORNER FOR "RIGHT" GRATE TO FIT IN KEYED FRAME.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)

REVISIONS

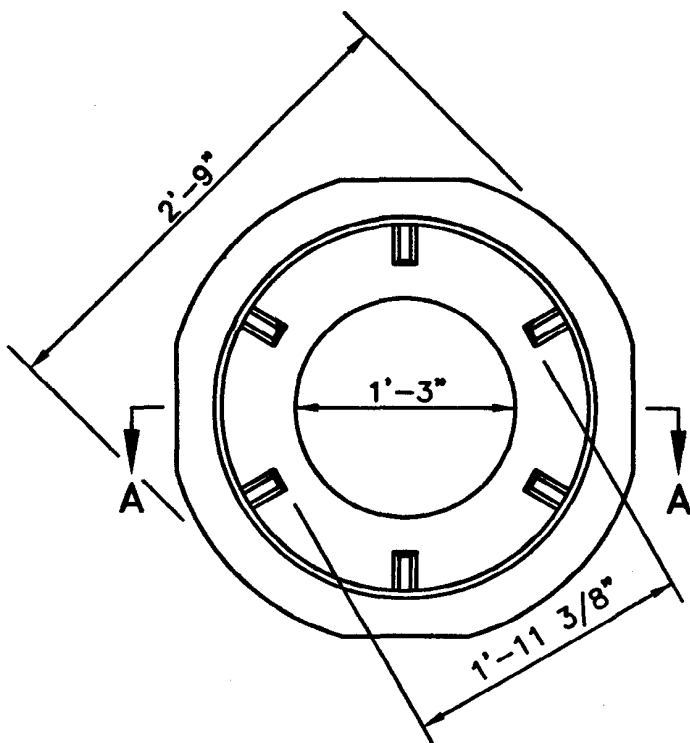
NO.	BY	DATE

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

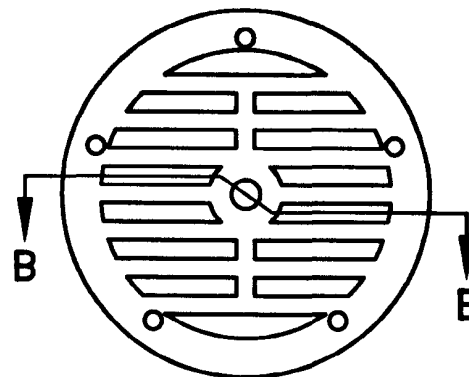
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

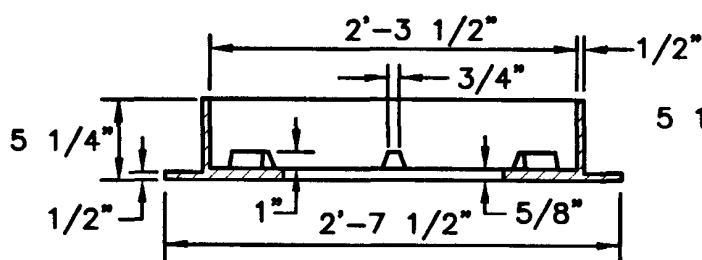
R.I.
STANDARD
6.3.4



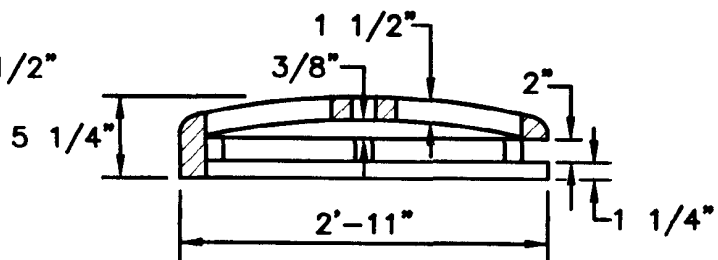
FRAME



GRATE



SECTION A-A



SECTION B-B

NOTE:

FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

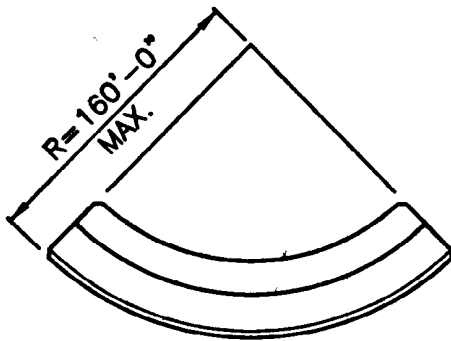
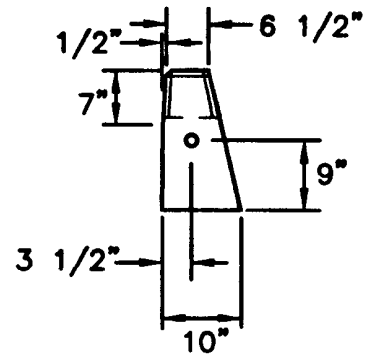
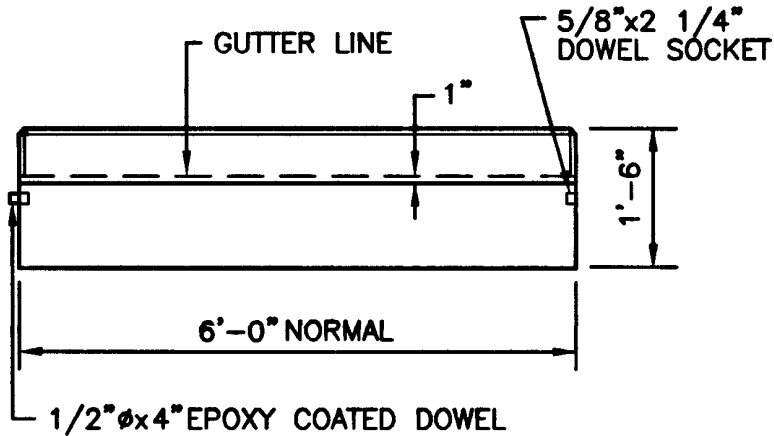
ROUND FRAME AND GRATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





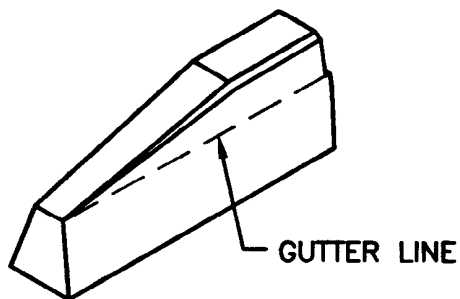
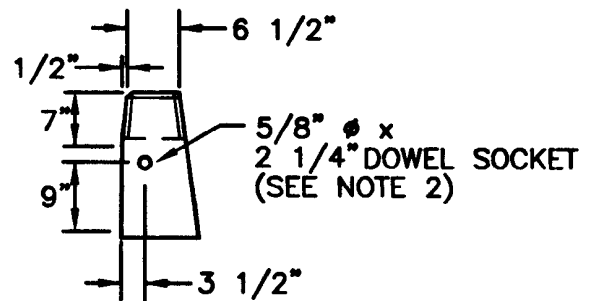
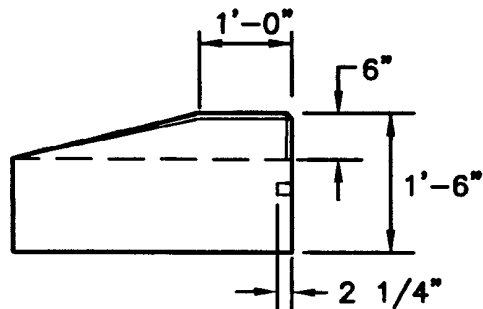
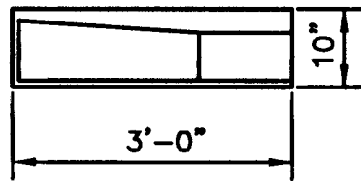
CIRCULAR CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PRECAST CONCRETE CURB		<div style="border: 2px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="font-size: 0.8em; margin-bottom: 5px;">R.I.</div> <div style="font-size: 0.8em; margin-bottom: 5px;">STANDARD</div> <div style="font-size: 1.5em; margin: 0;">7.1.0</div> </div>
NO.	BY	DATE			
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> JUNE 15, 1998 <small>ISSUE DATE</small> </div> </div>					



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION, FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ϕ x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**3'-0" PRECAST CONCRETE
TRANSITION CURB**

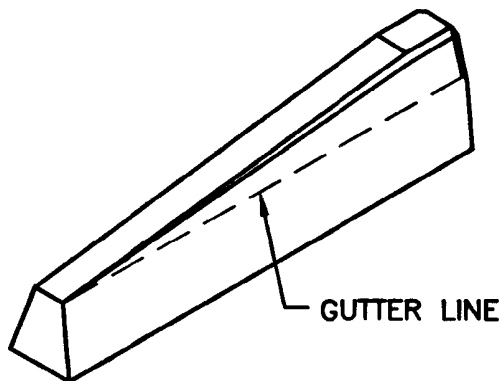
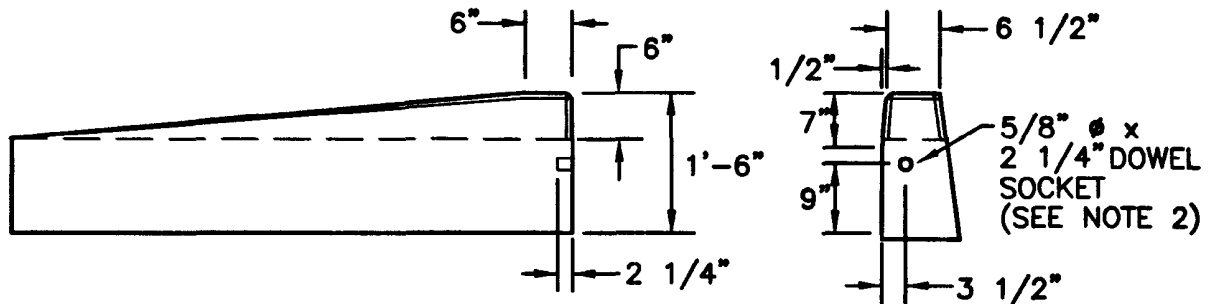
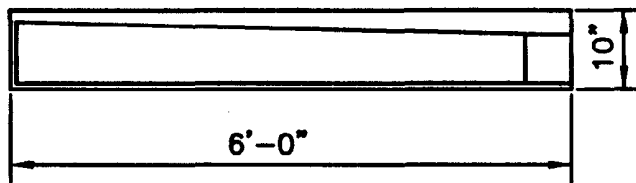
REVISIONS		
NO.	BY	DATE

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ϕ x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

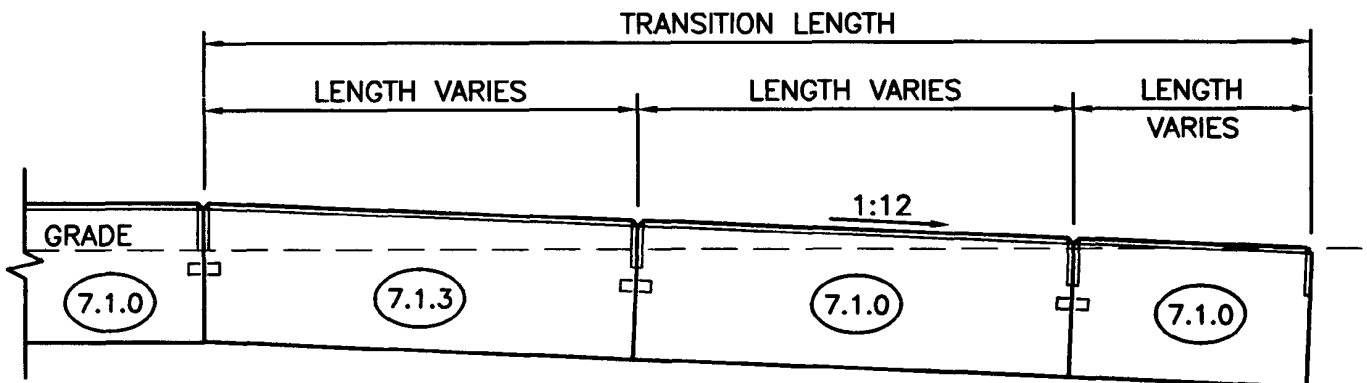
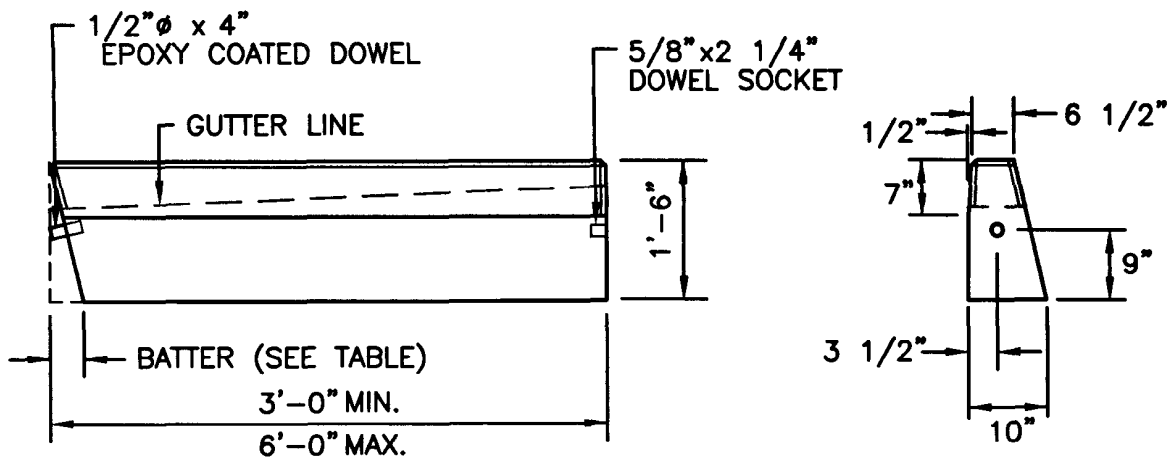
**6'-0" PRECAST CONCRETE
TRANSITION CURB**

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
5. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).

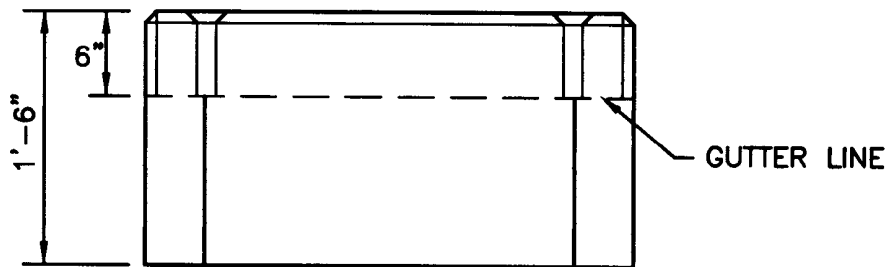
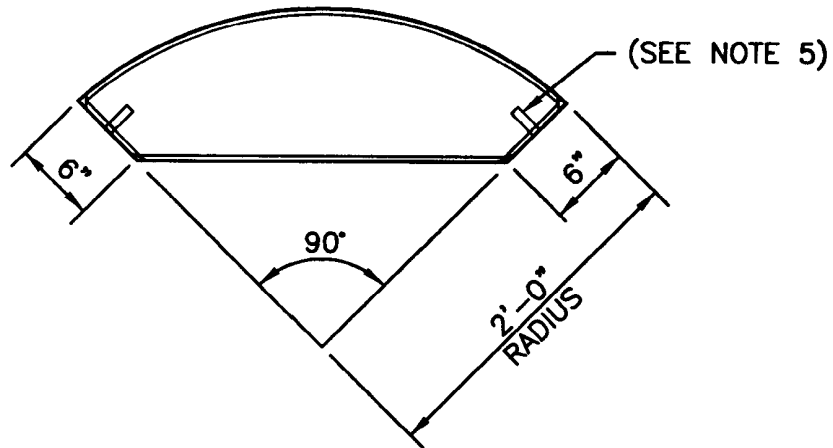
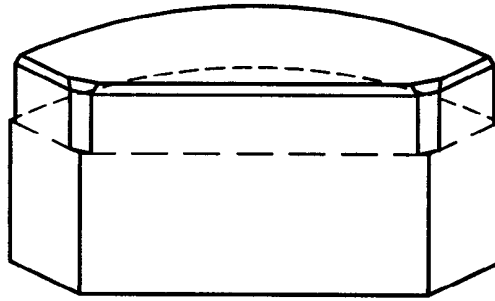
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PRECAST CONCRETE WHEELCHAIR RAMP TRANSITION CURB		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.1.3 </div>
NO.	BY	DATE			

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. NO REINFORCEMENT REQUIRED.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. SEE STD. 7.1.0 FOR DOWEL SOCKET LOCATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

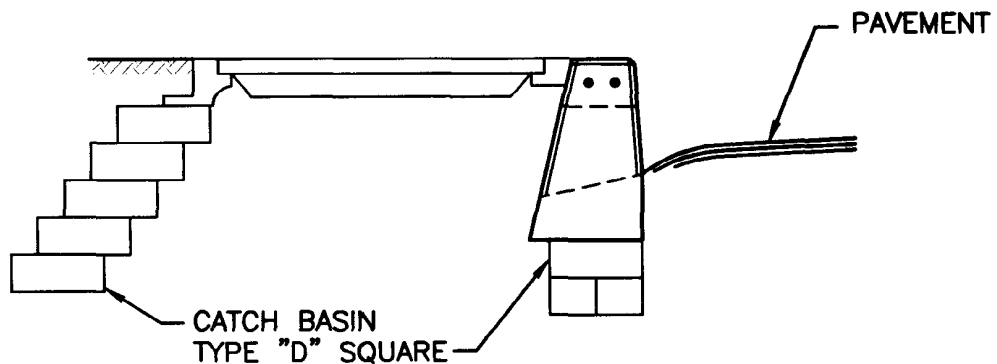
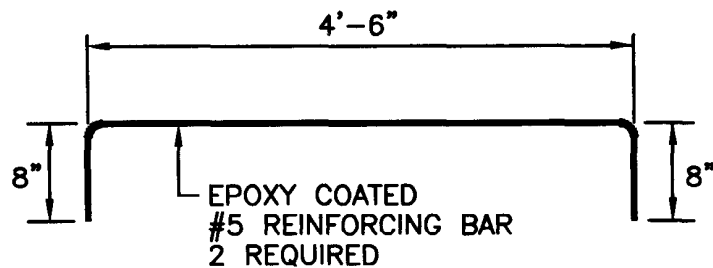
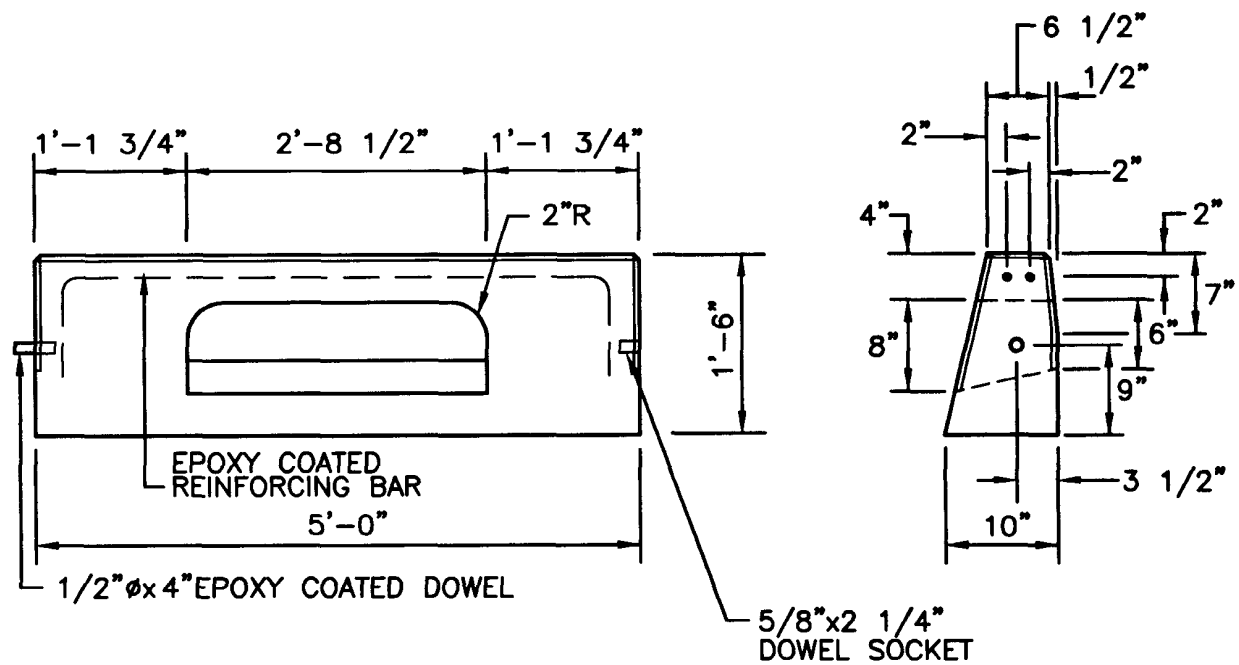
**PRECAST CONCRETE
2'-0" RADIUS CORNER**

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**PRECAST CONCRETE INLET STONE
(FOR SQUARE CATCH BASIN)**

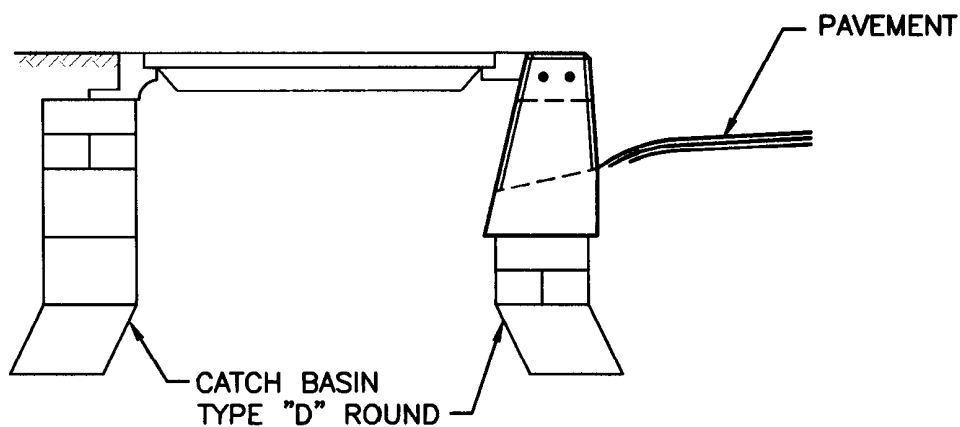
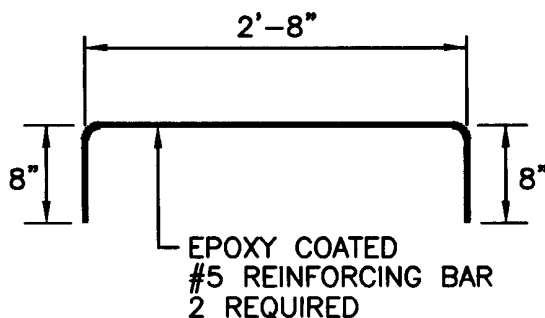
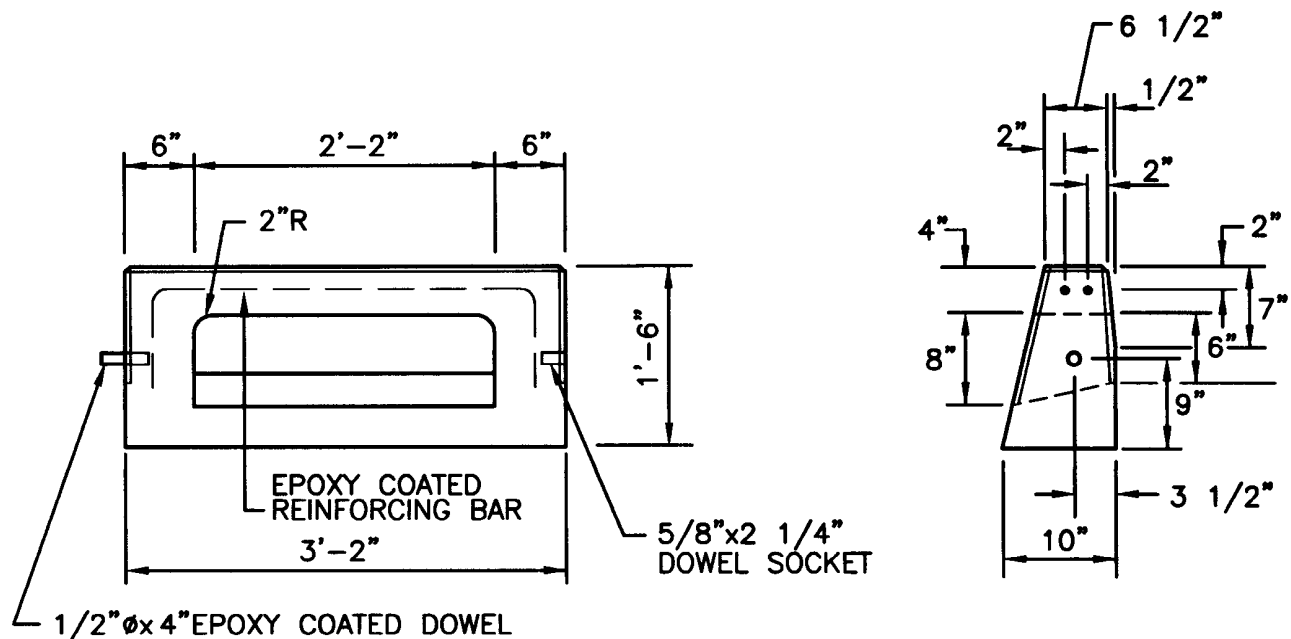
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**PRECAST CONCRETE INLET STONE
(FOR ROUND CATCH BASIN)**

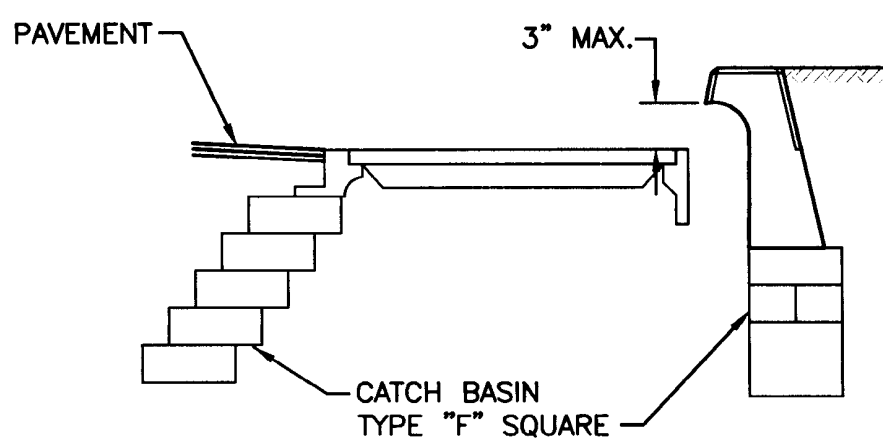
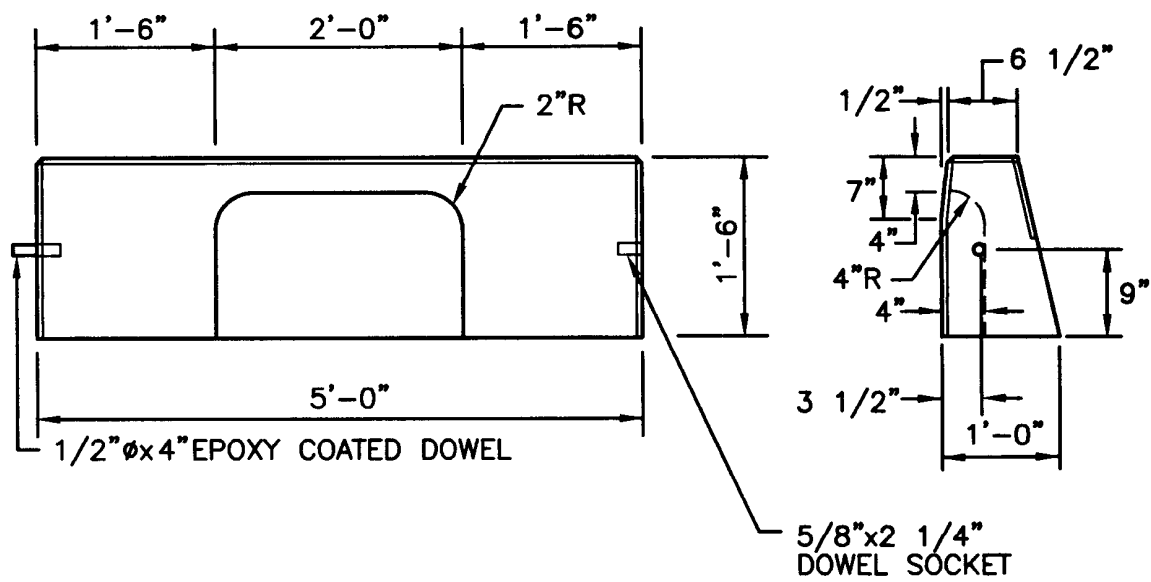
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
7.1.6



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
 2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
 3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**PRECAST CONCRETE APRON STONE
(FOR SQUARE CATCH BASIN)**

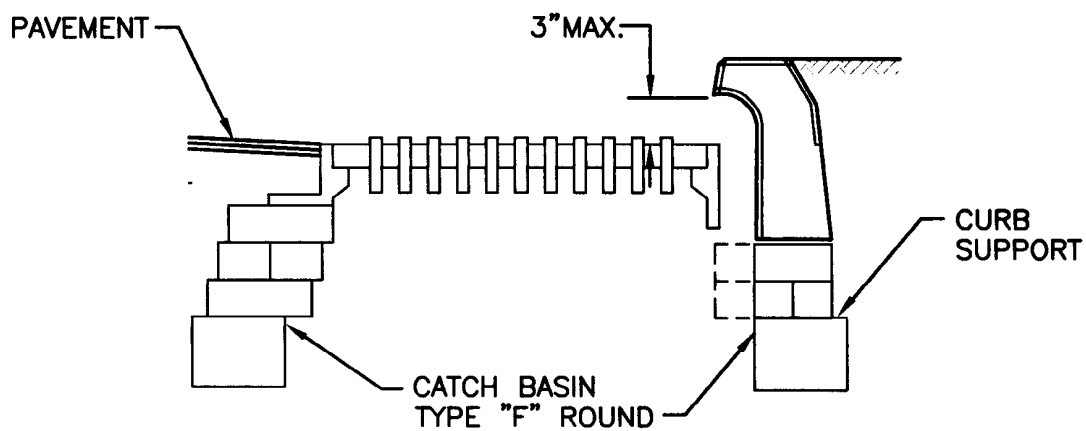
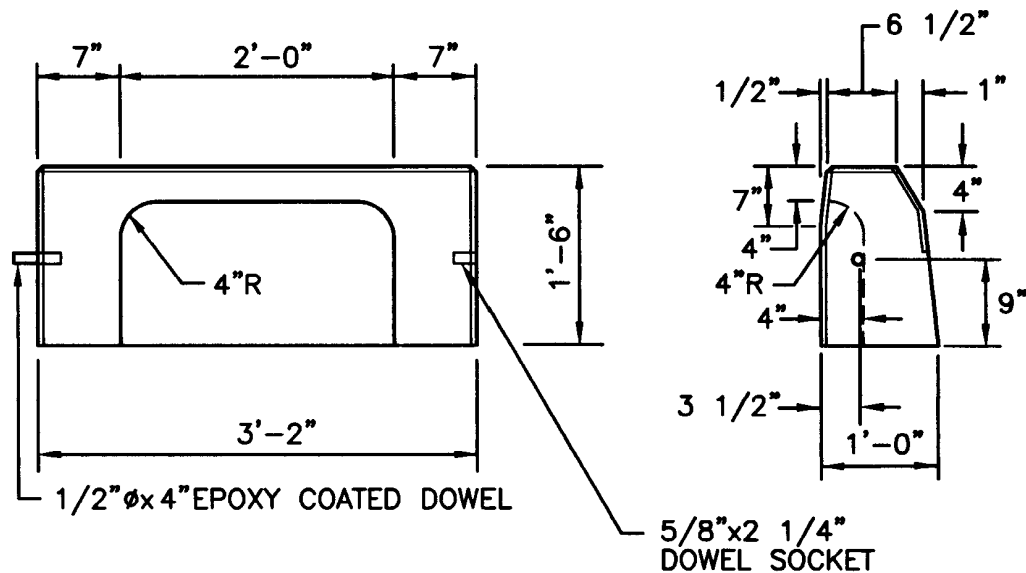
REVISIONS		
NO.	BY	DATE

James H. Casella
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**PRECAST CONCRETE APRON STONE
(FOR ROUND CATCH BASIN)**

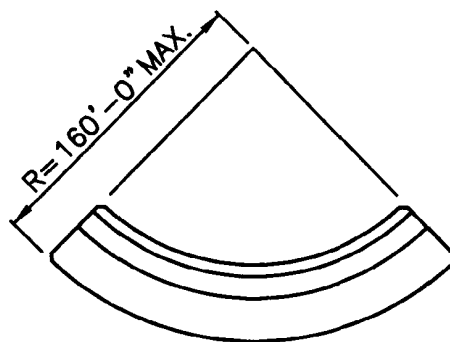
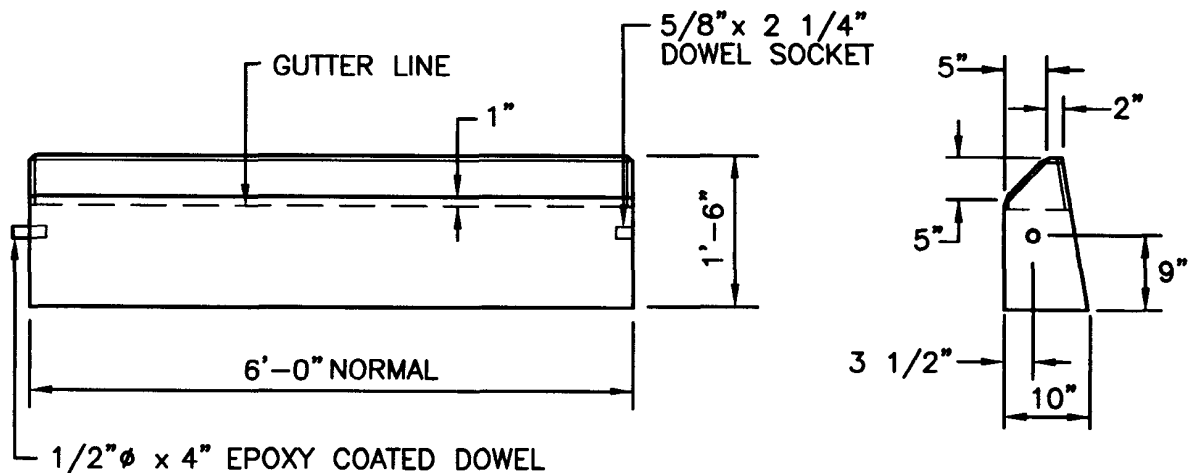
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





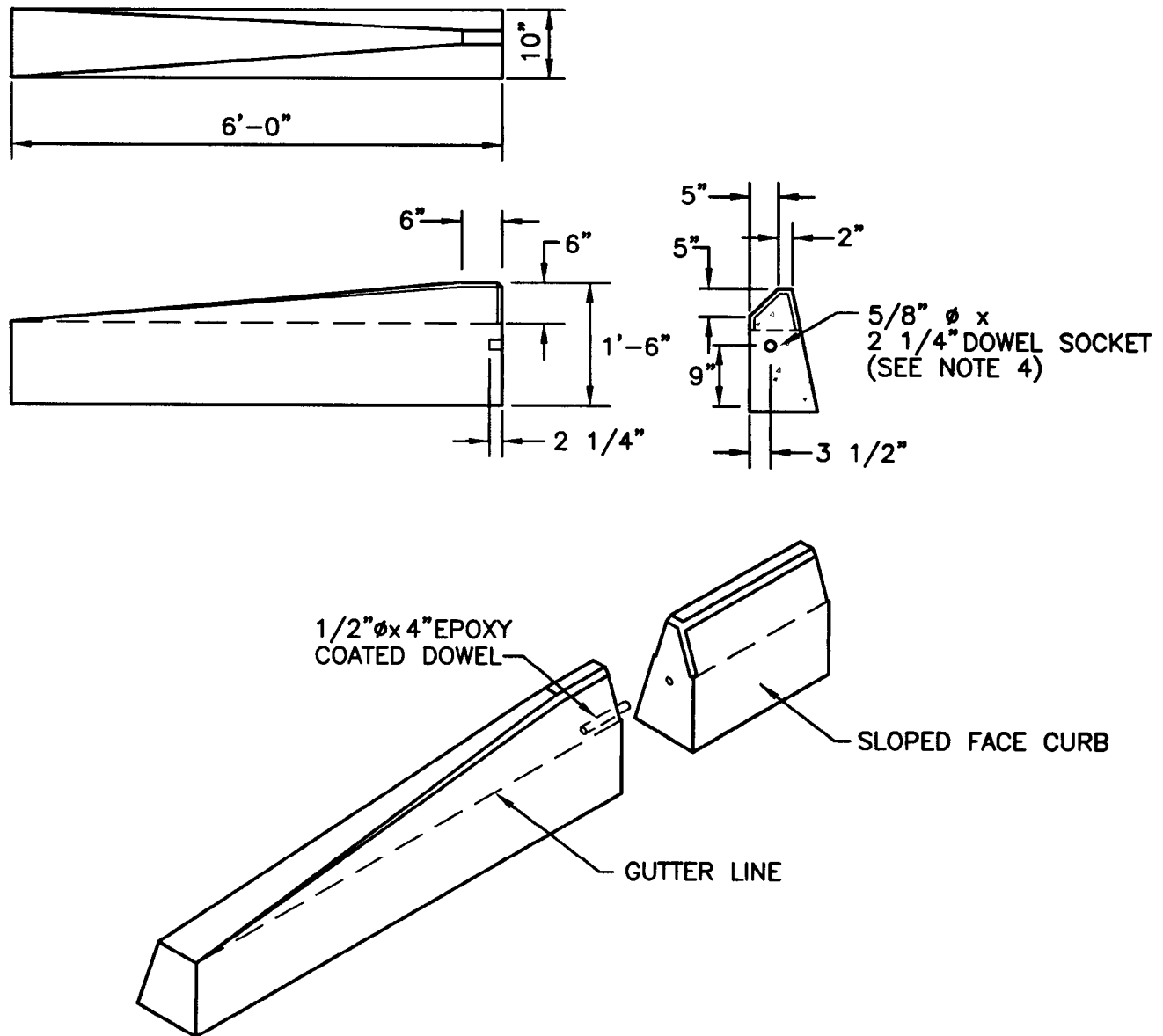
CIRCULAR CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PRECAST CONCRETE SLOPED FACE CURB		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; width: 80px; margin: 0 auto;"> R.I. STANDARD 7.2.0 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> JUNE 15, 1998 <small>ISSUE DATE</small> </div> </div>		



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ϕ x 4" EPOXY COATED DOWEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

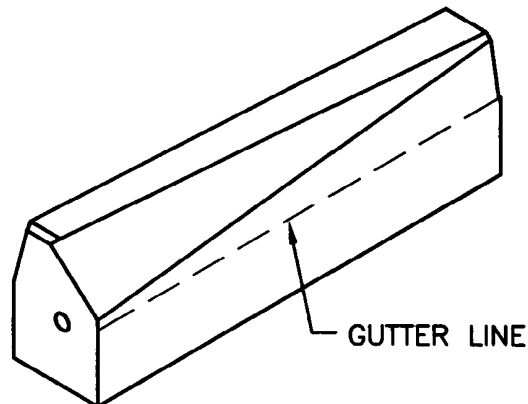
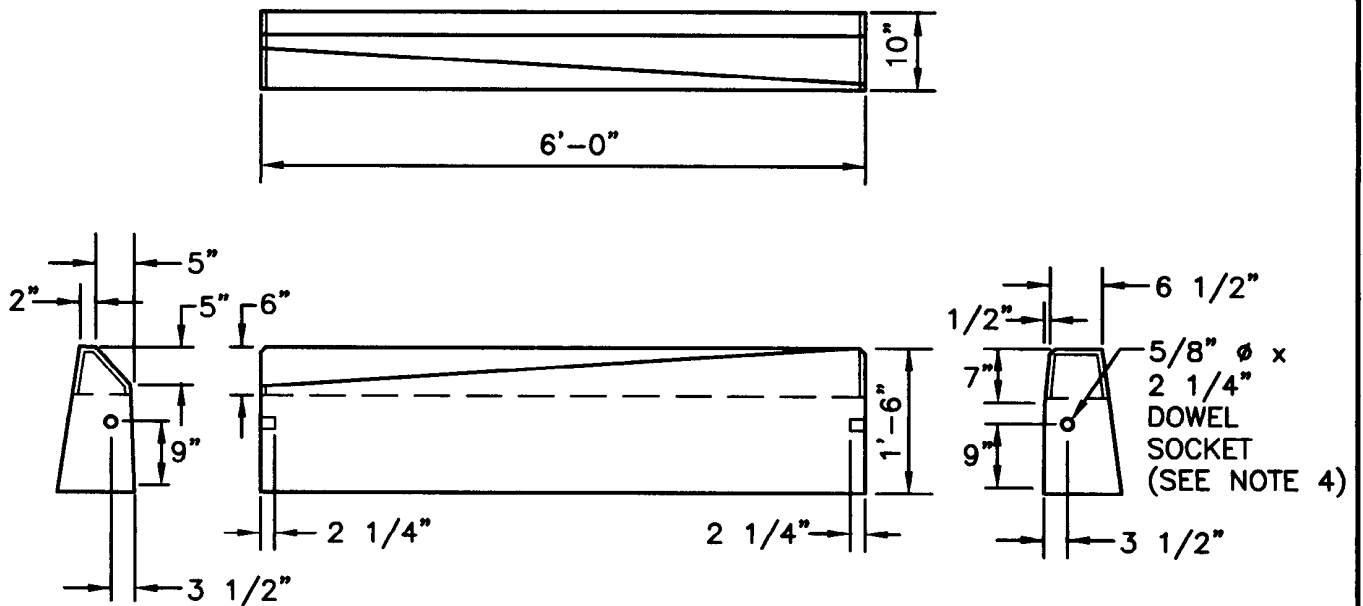
**PRECAST CONCRETE
SLOPED FACE TRANSITION CURB**

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" ϕ x 4" EPOXY COATED DOWEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

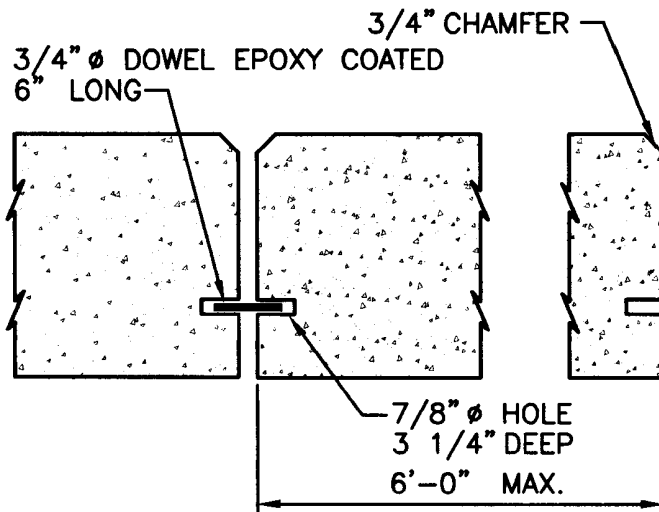
PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

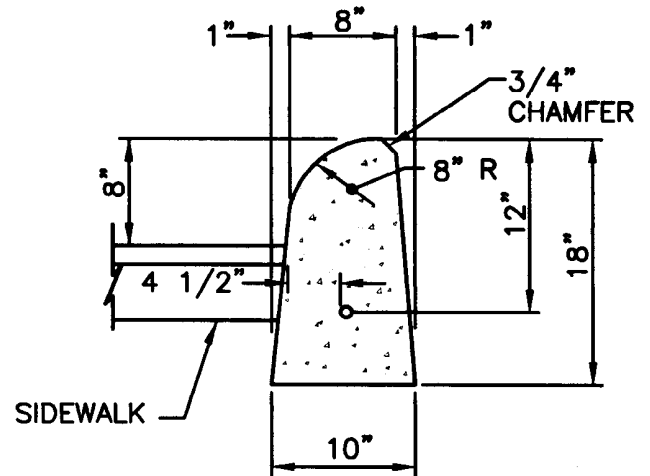
Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



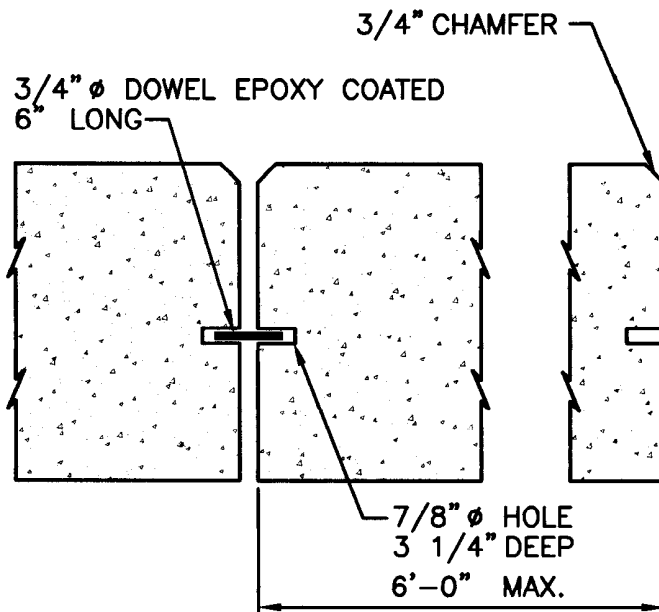


LONGITUDINAL SECTION @ JOINT

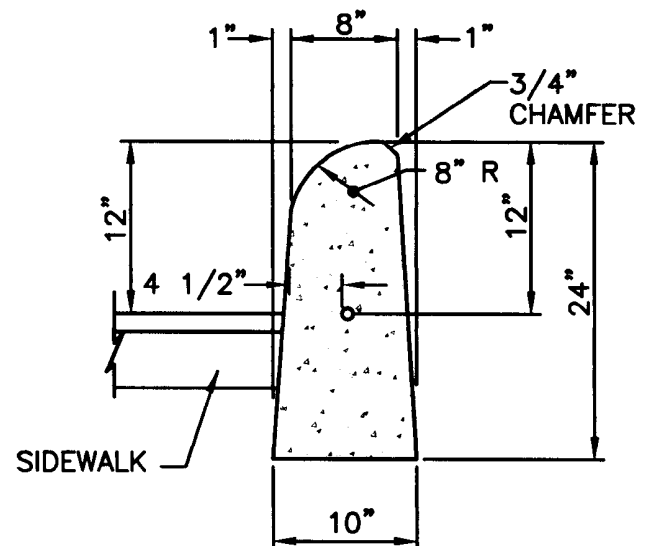


END SECTION

1'-6" LOT CURB



LONGITUDINAL SECTION @ JOINT



END SECTION

2'-0" LOT CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/8" JOINTS DOWELED WITH A 3/4" Ø DOWEL 6" LONG.
3. TOP AND EXPOSED SURFACES TO H+ 2" TO HAVE A SPONGE FLOAT FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE LOT CURB

REVISIONS

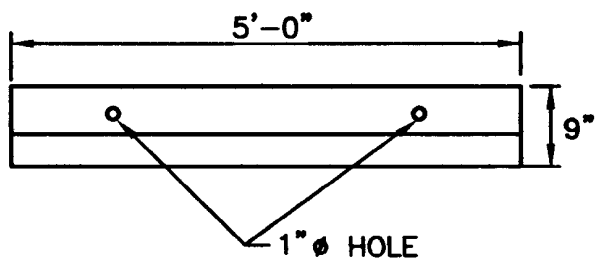
NO.	BY	DATE

James H. Casabelli
CHIEF ENGINEER
TRANSPORTATION

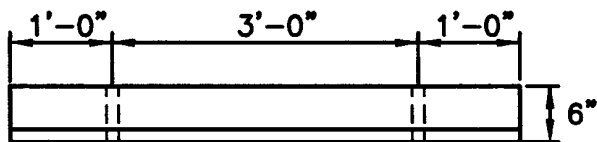
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

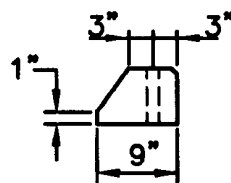
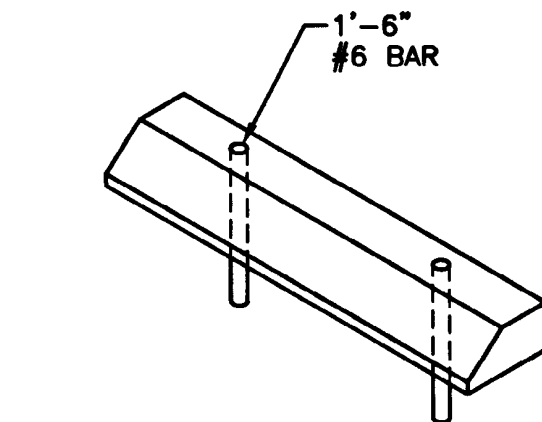
R.I.
STANDARD
7.2.3



PLAN



FRONT ELEVATION



SIDE ELEVATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
3. ALL SURFACES TO HAVE A SPONGE FLOAT FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

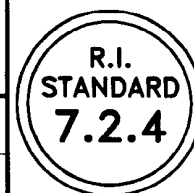
REVISIONS		
NO.	BY	DATE

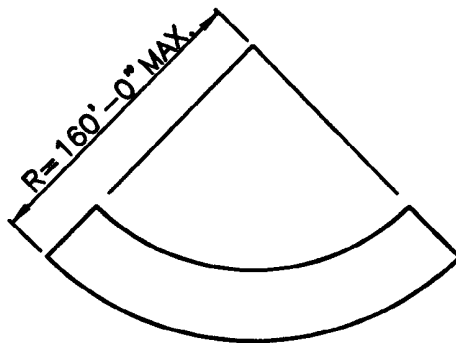
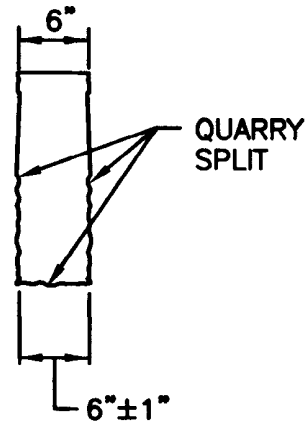
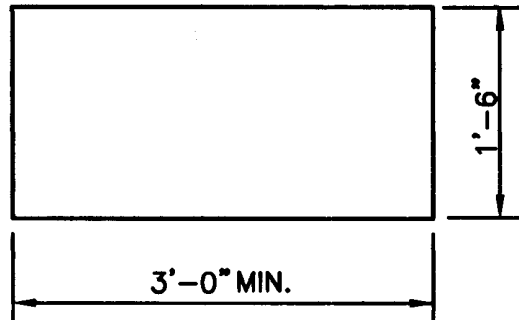
PRECAST CONCRETE CAR STOPS

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





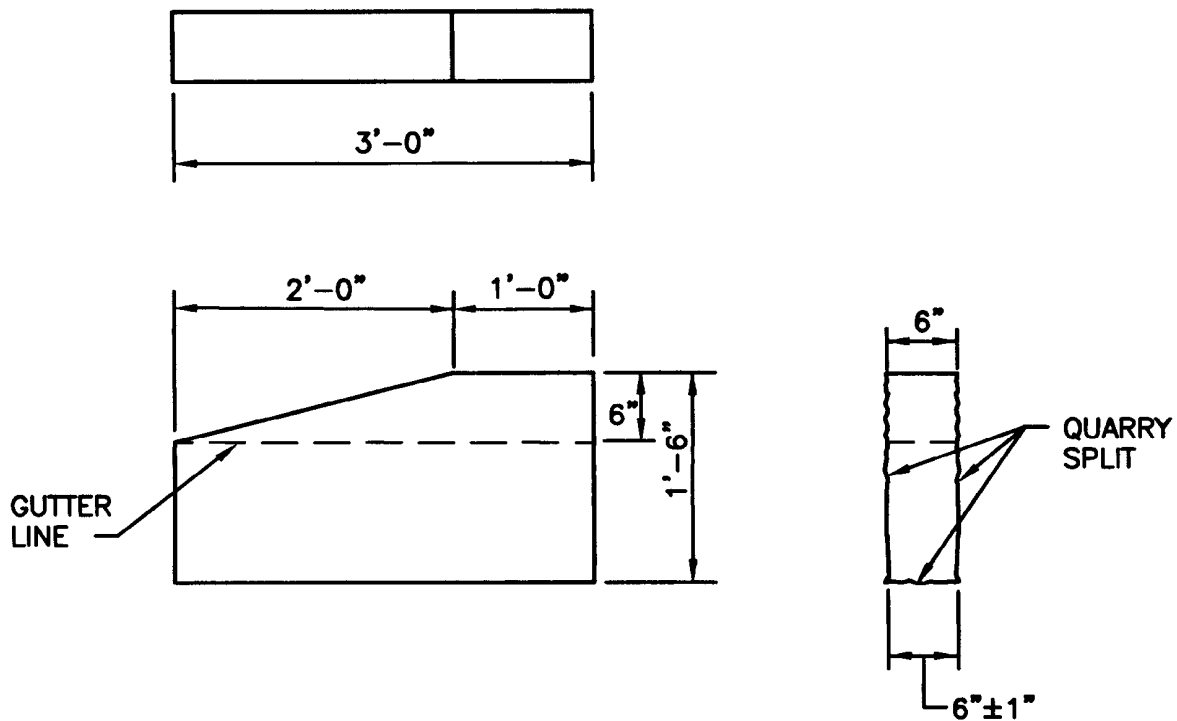
CIRCULAR CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			GRANITE CURB		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.3.0 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>		



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

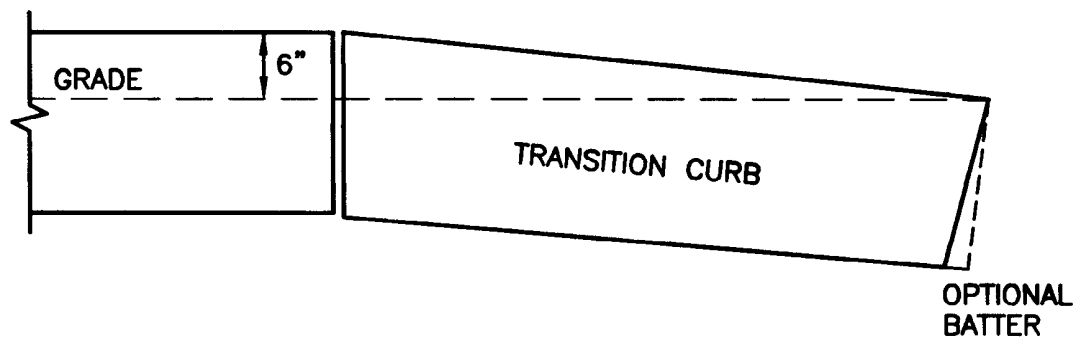
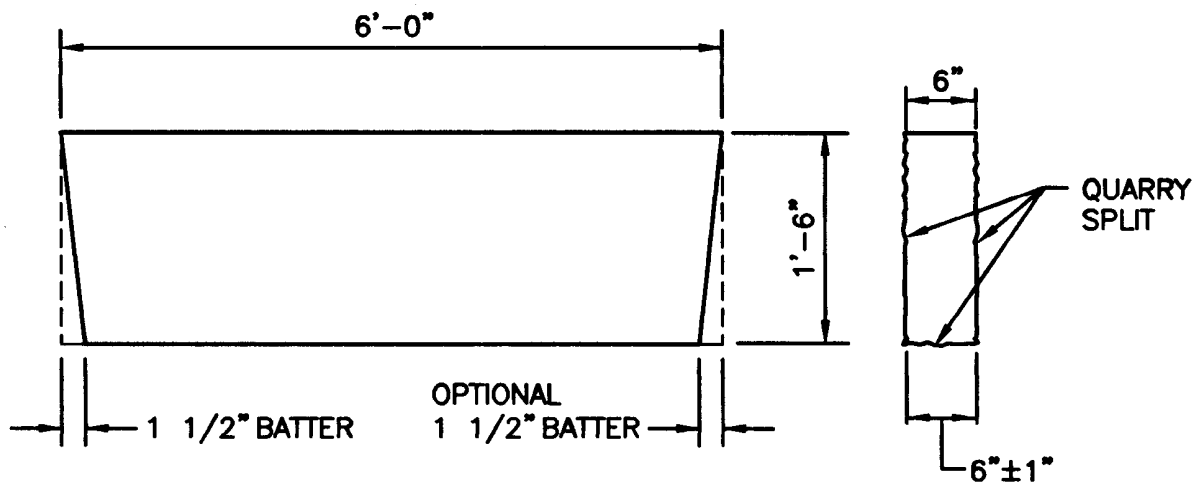
3'-0" GRANITE TRANSITION CURB

James A. Capaldi
 CHIEF ENGINEER
 TRANSPORTATION

Edmund Parker Jr.
 CHIEF DESIGN ENGINEER
 TRANSPORTATION

JUNE 15, 1998
 ISSUE DATE





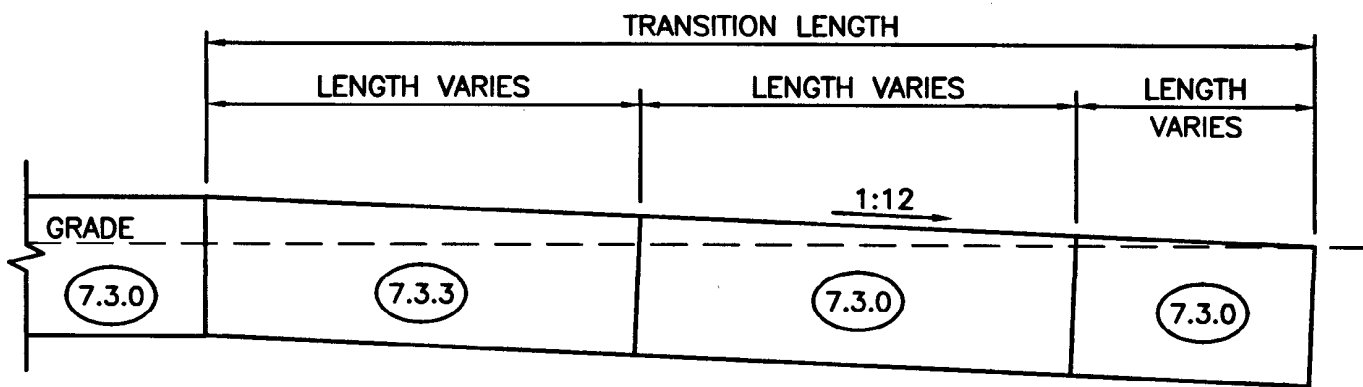
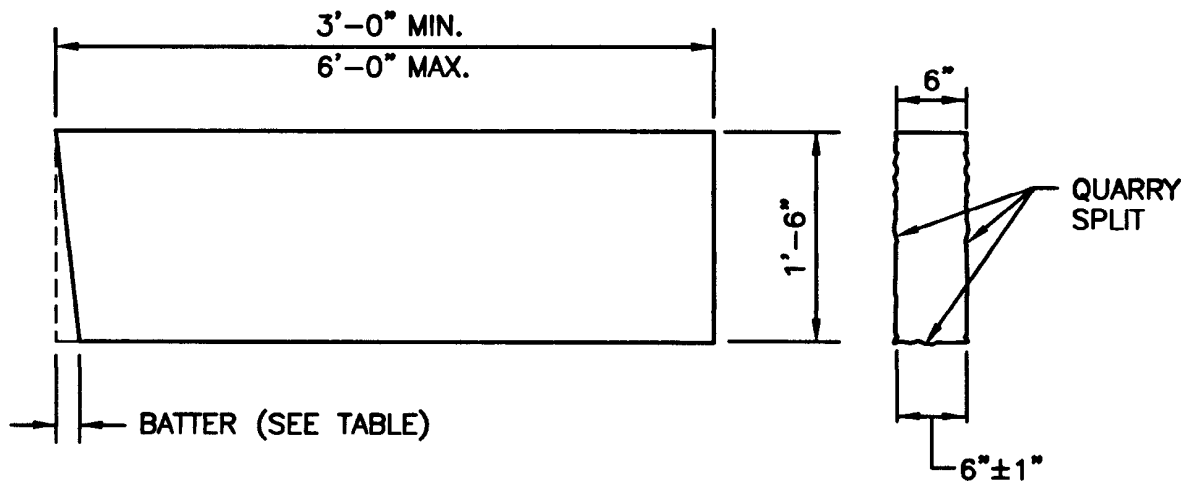


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			6'-0" GRANITE TRANSITION CURB		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.3.2 </div>	
NO.	BY	DATE				
			 CHIEF ENGINEER TRANSPORTATION			JUNE 15, 1998 ISSUE DATE
			 CHIEF DESIGN ENGINEER TRANSPORTATION			



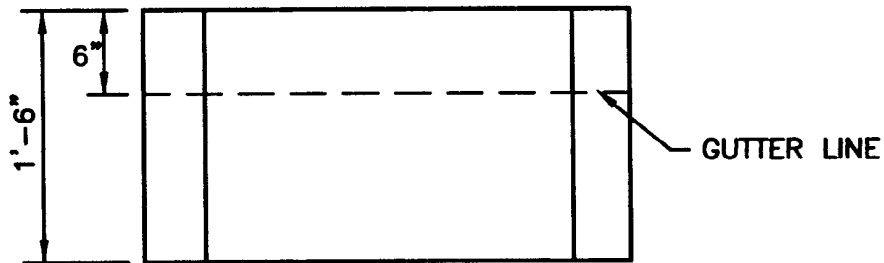
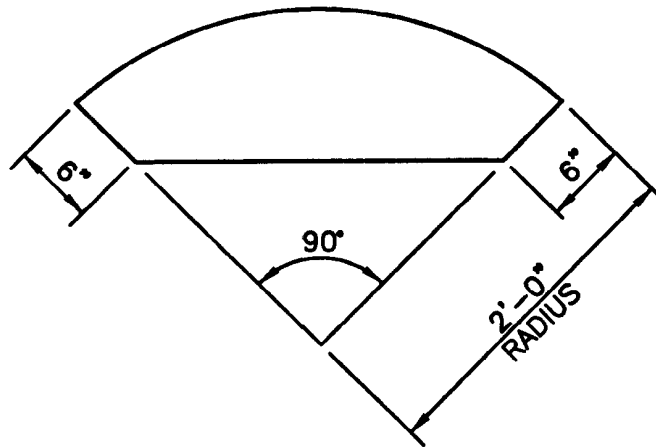
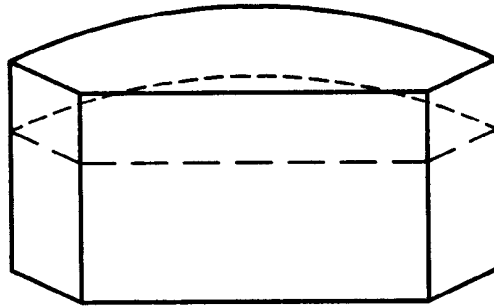
TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
4. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			GRANITE WHEELCHAIR RAMP TRANSITION CURB		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.3.3 </div>
NO.	BY	DATE			
 CHIEF ENGINEER TRANSPORTATION			 CHIEF DESIGN ENGINEER TRANSPORTATION		JUNE 15, 1998 ISSUE DATE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

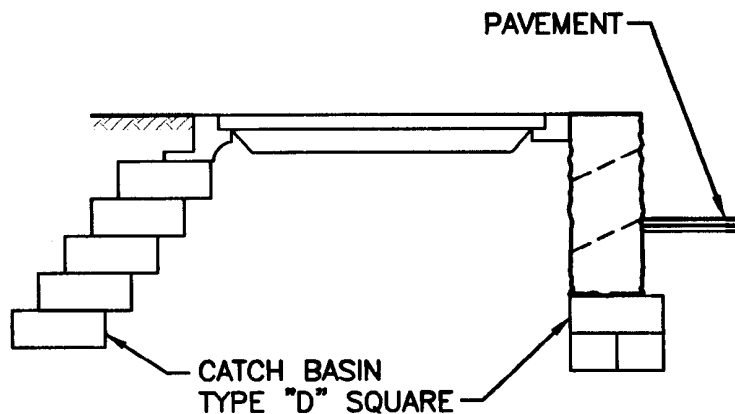
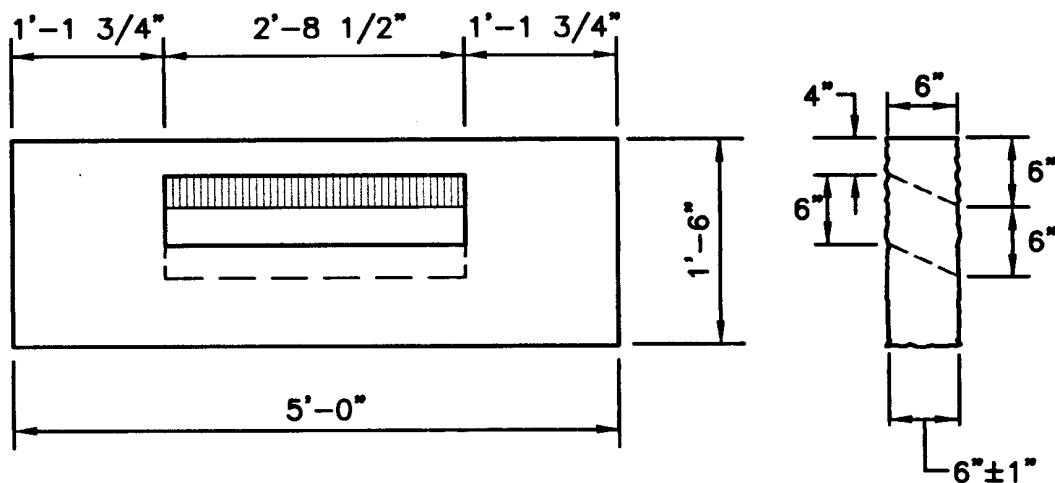
GRANITE 2'-0" RADIUS CORNER

James H. Capaldi
 CHIEF ENGINEER
 TRANSPORTATION

Edmund J. Parker
 CHIEF DESIGN ENGINEER
 TRANSPORTATION

JUNE 15, 1998
 ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

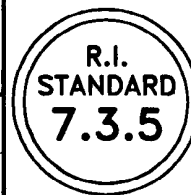
REVISIONS		
NO.	BY	DATE

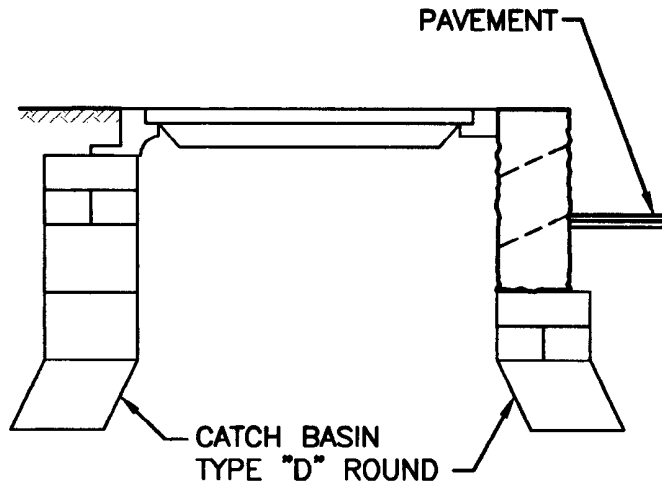
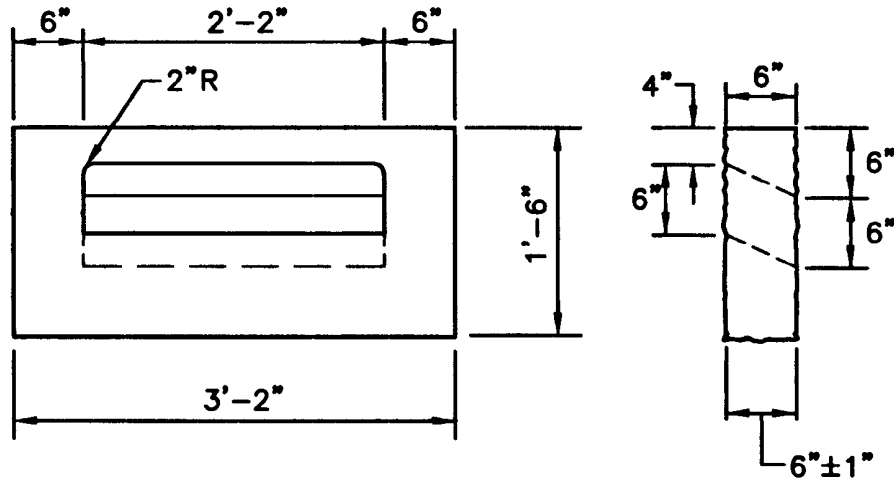
**GRANITE INLET STONE
(FOR SQUARE CATCH BASIN)**

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

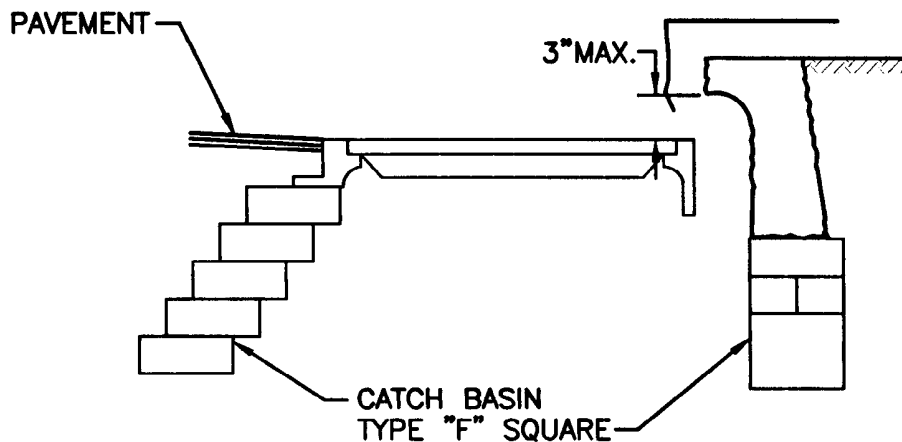
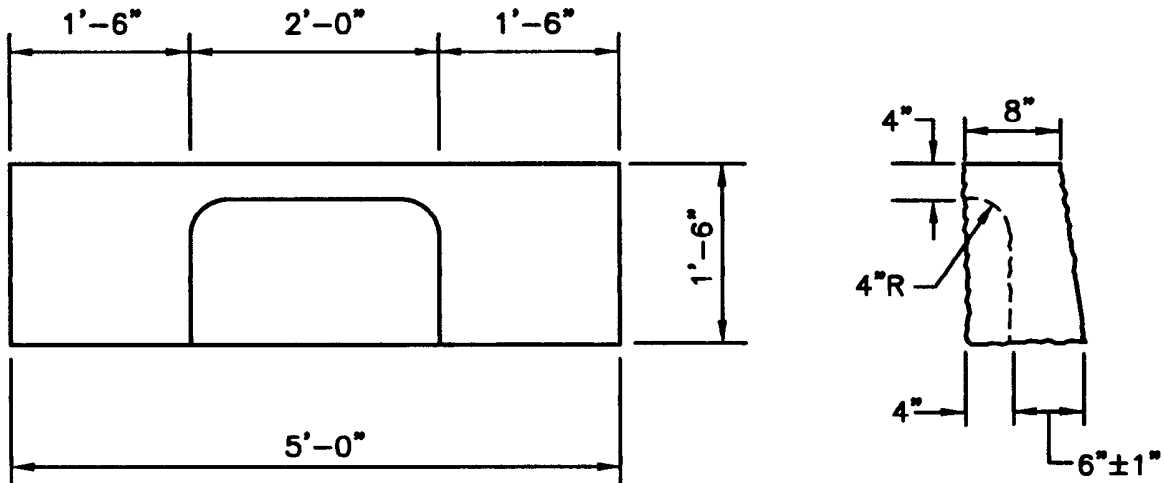
**GRANITE INLET STONE
(FOR ROUND CATCH BASIN)**

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

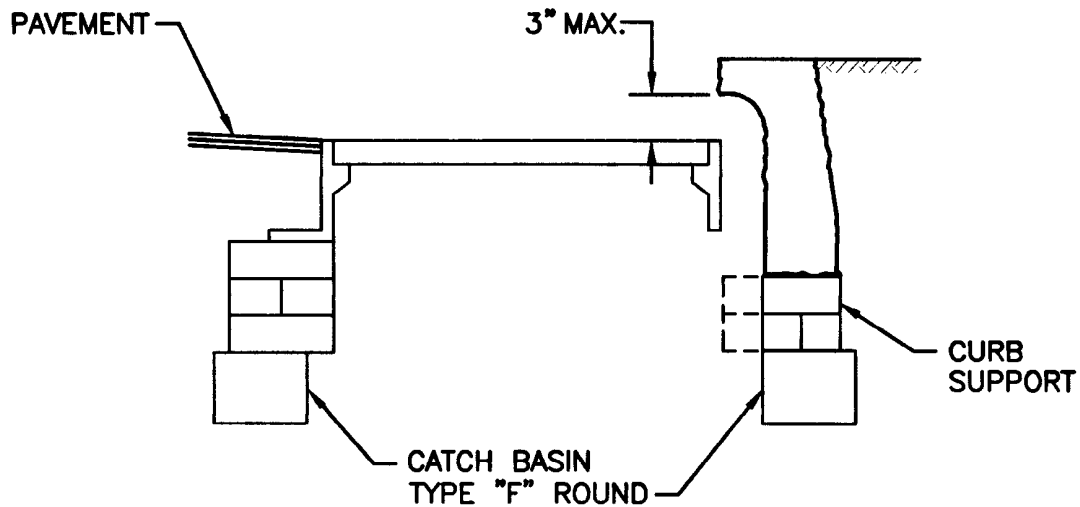
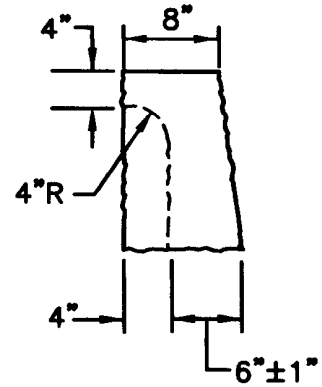
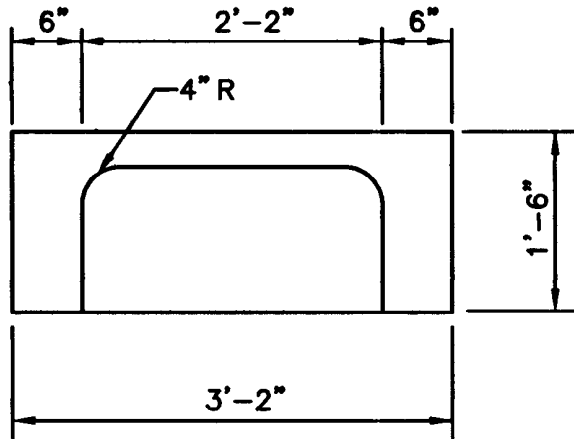
**GRANITE APRON STONE
(FOR SQUARE CATCH BASIN)**

James H. Casella
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



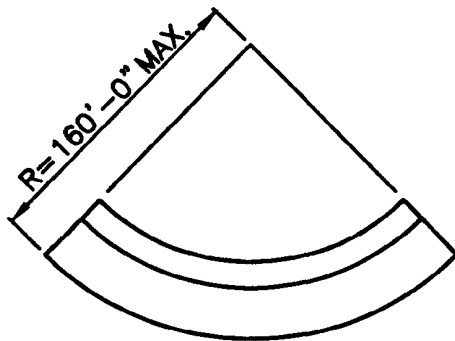
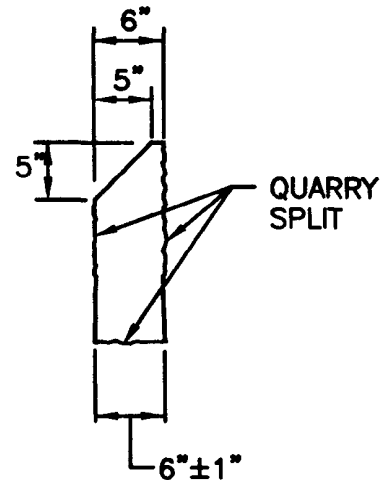
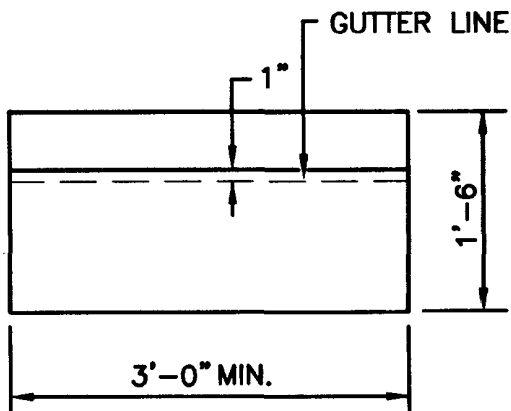


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			GRANITE APRON STONE (FOR ROUND CATCH BASIN)	<div><div>R.I. STANDARD 7.3.8</div></div>
NO.	BY	DATE		
			<div><div><div>John A. Capaldi</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edward J. Parker</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>	




CIRCULAR CURB


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

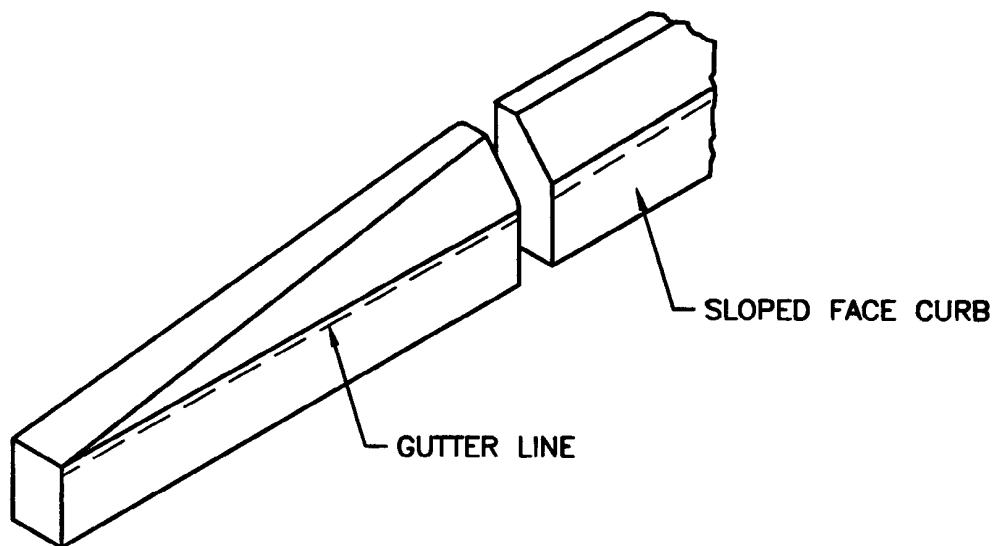
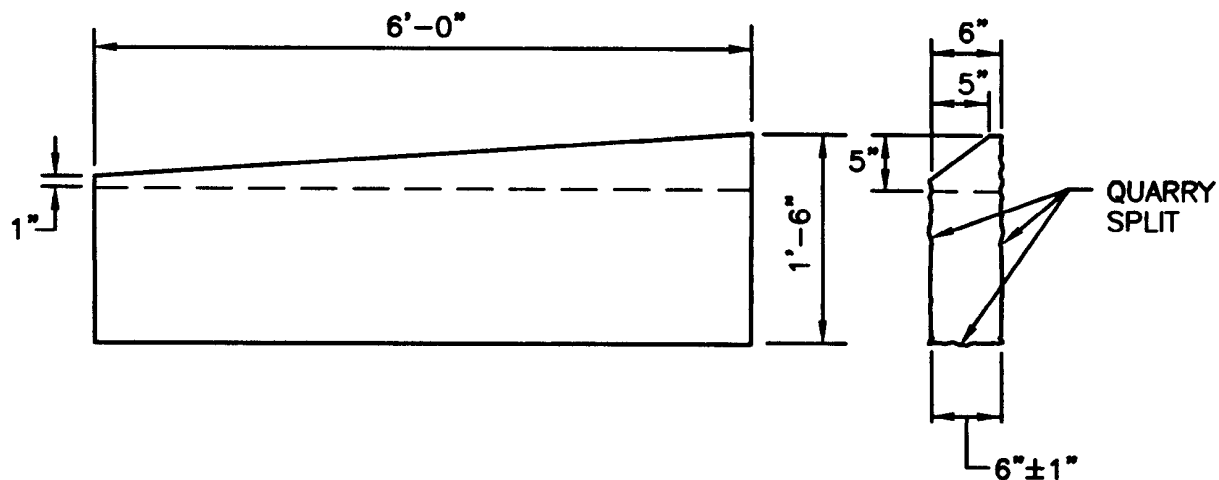
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			GRANITE SLOPED FACE CURB	<div><div>R.I. STANDARD 7.4.0</div></div>
NO.	BY	DATE		


CHIEF ENGINEER
TRANSPORTATION


CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

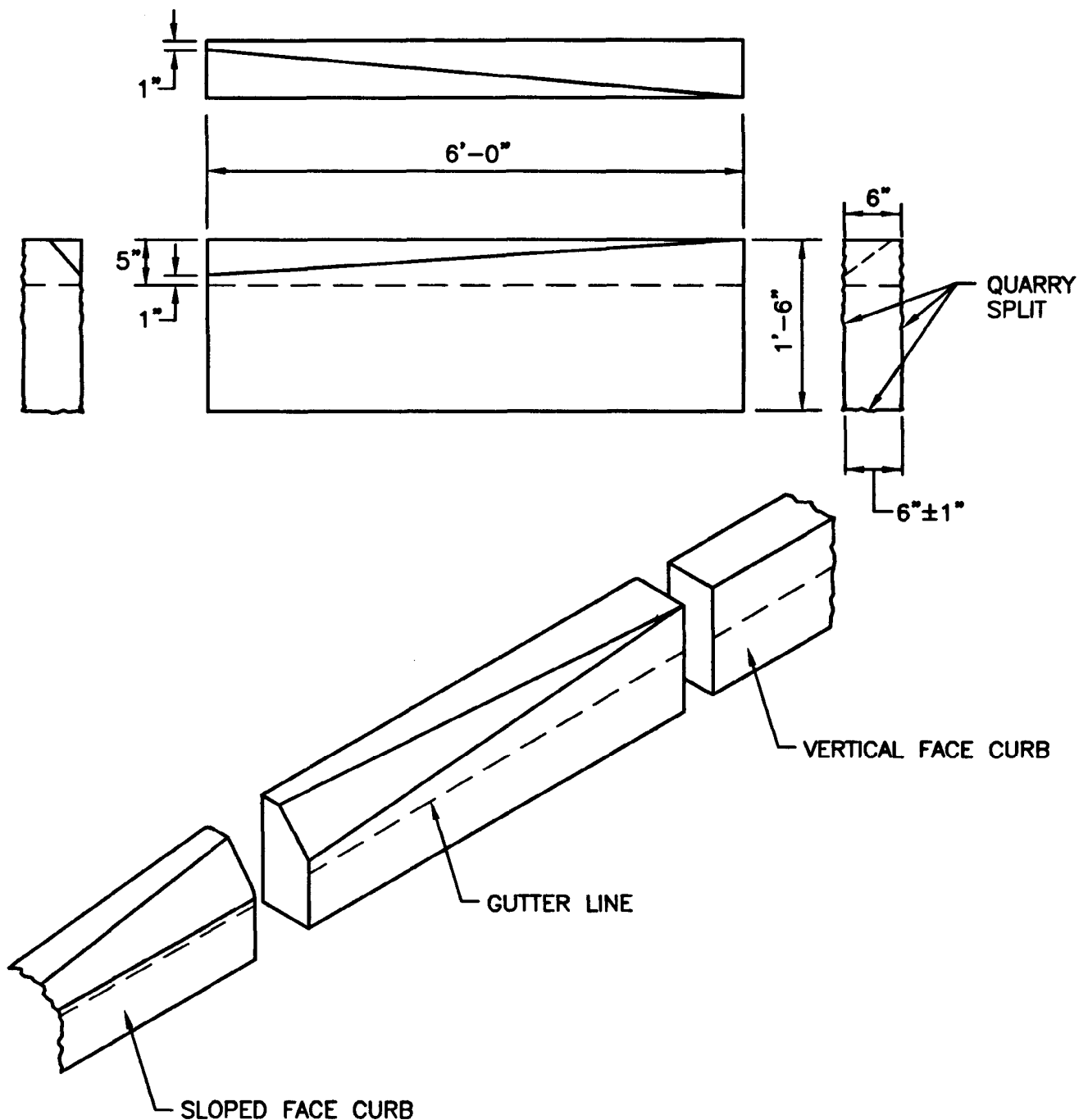


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			GRANITE SLOPED FACE TRANSITION CURB		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.4.1 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>		



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

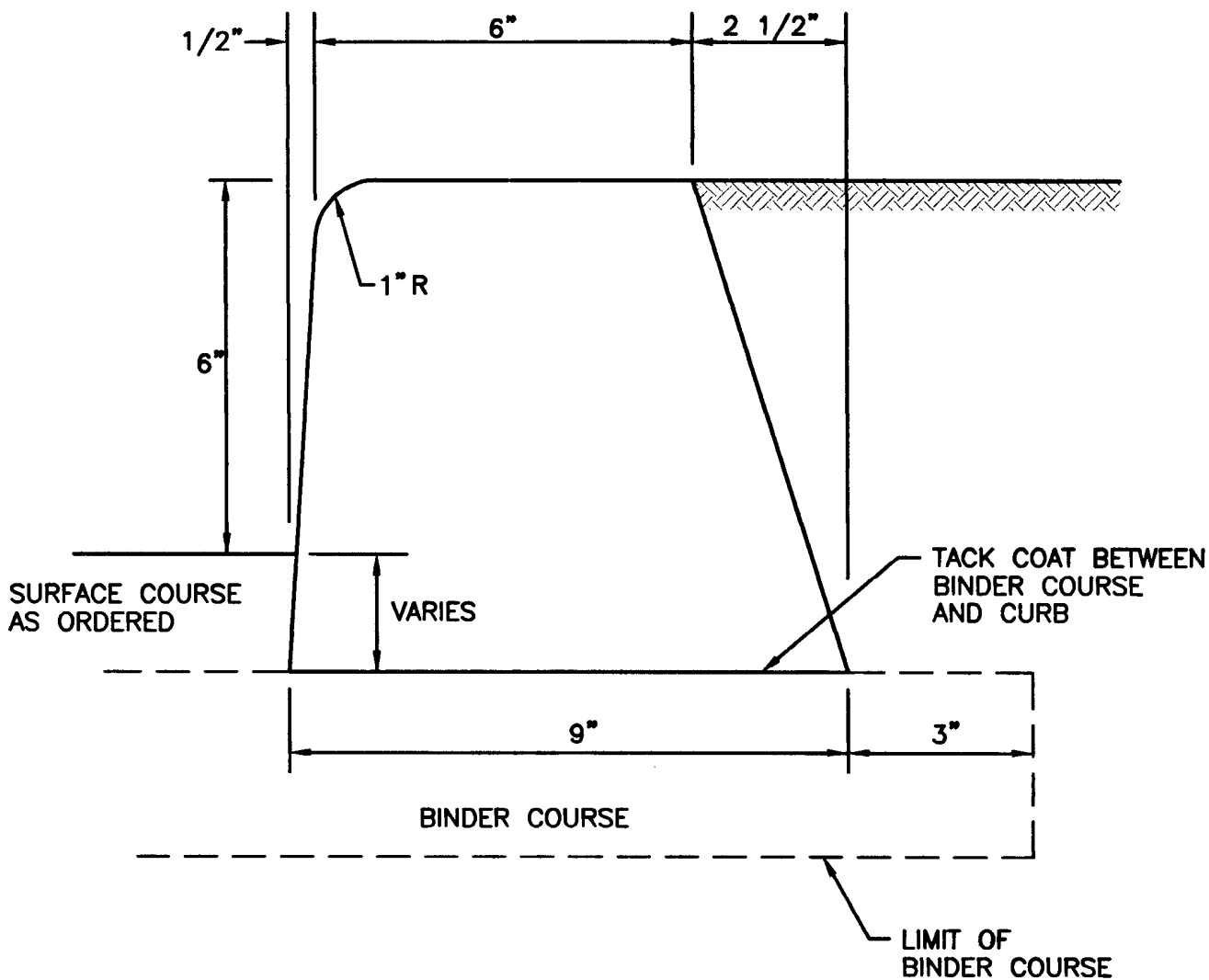
**GRANITE TRANSITION CURB
(VERTICAL FACE TO SLOPED FACE)**

James H. Casella
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BITUMINOUS CONCRETE LIP CURB

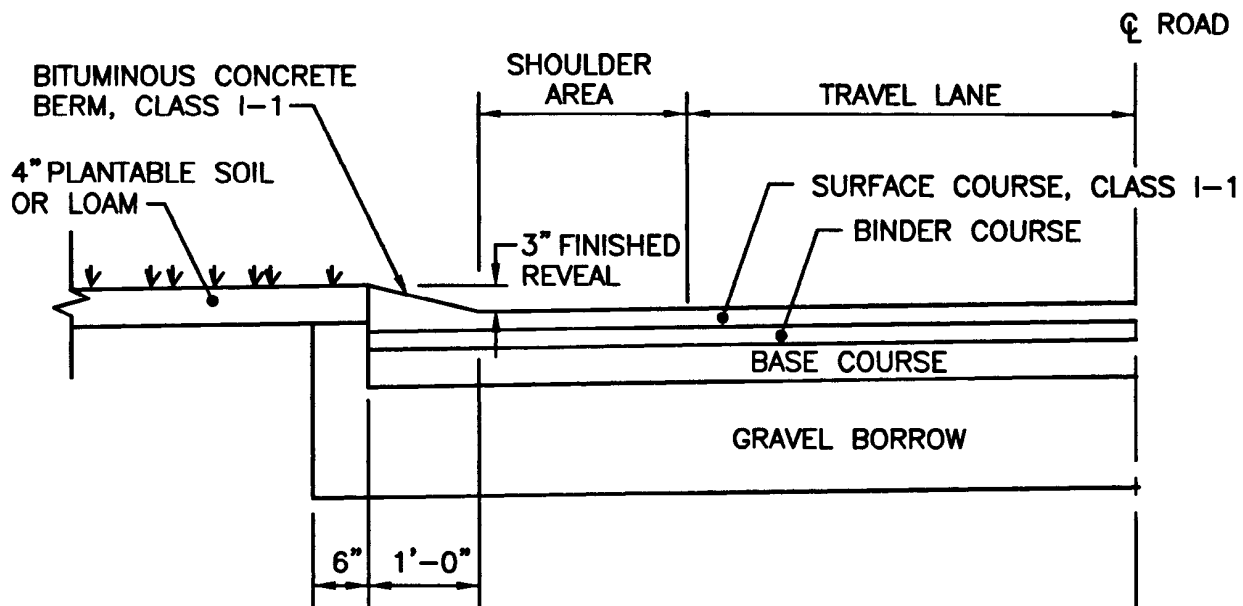
REVISIONS		
NO.	BY	DATE

James H. Casabelli
CHIEF ENGINEER
TRANSPORTATION

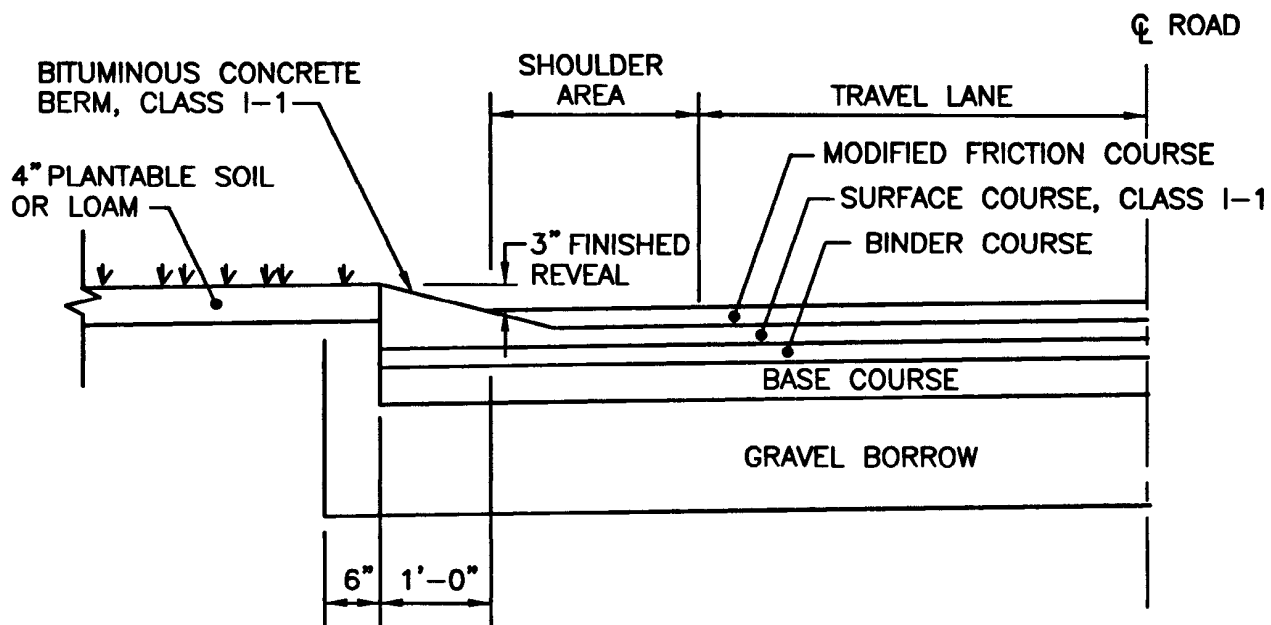
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





CONSTRUCTION METHOD A





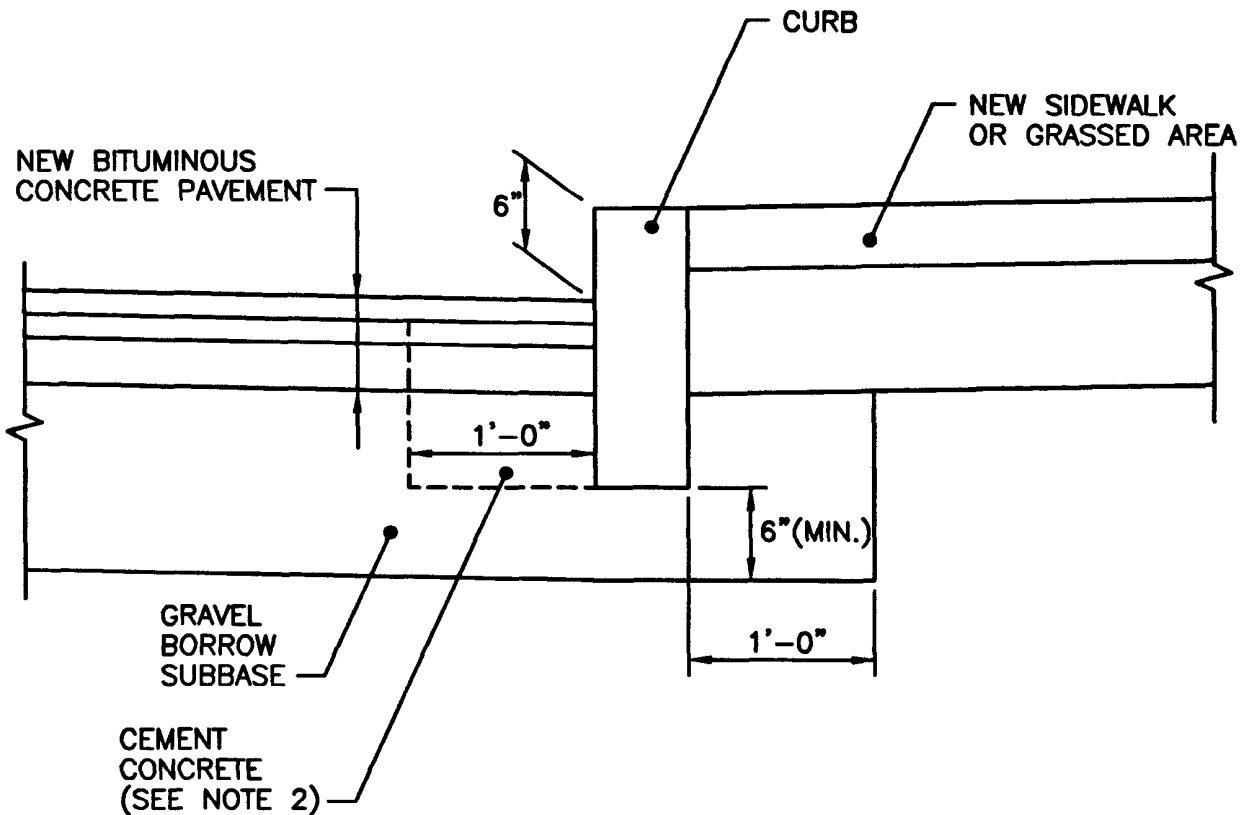
CONSTRUCTION METHOD B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. BITUMINOUS BERM CAN BE PLACED AT THE SAME TIME THAT THE SURFACE COURSE LAYER IS PLACED ON THE PROJECT ROADWAY, OR IT CAN BE INSTALLED IN A SEPARATE OPERATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BITUMINOUS BERM		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.5.1 </div>
NO.	BY	DATE			
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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

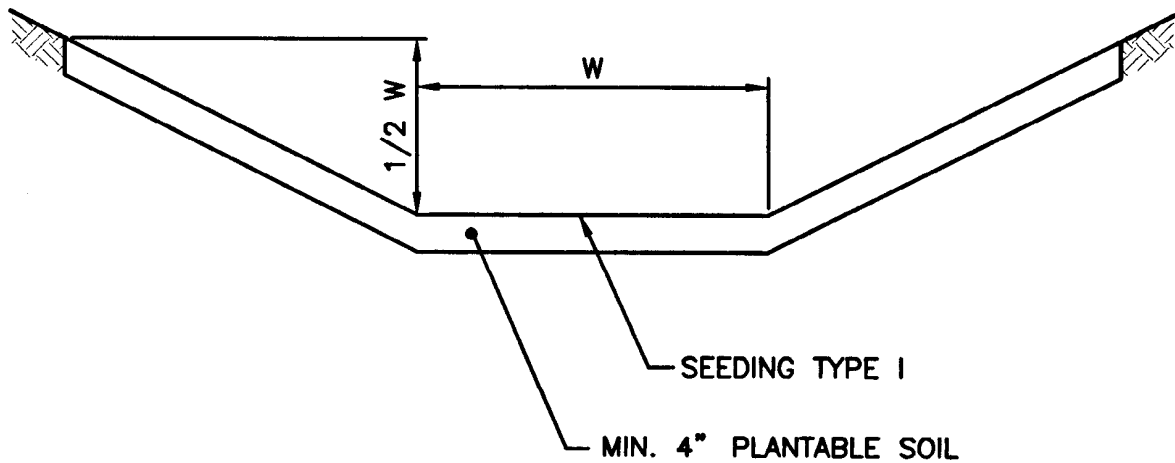
CURB SETTING DETAIL

James H. Casabelli
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





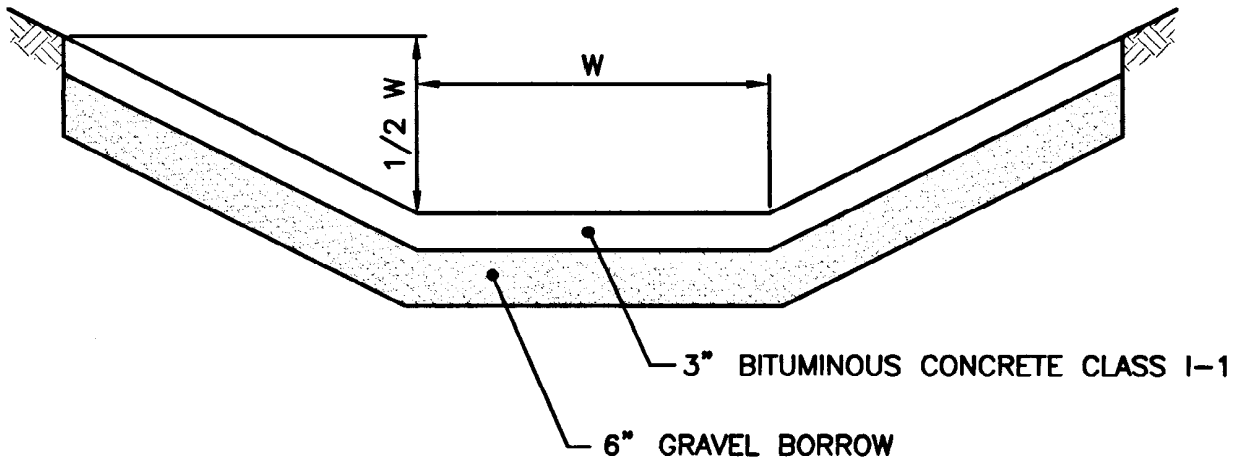


NOTE:

SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION



REVISIONS			SEEDED DITCH		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 8.1.0 </div>
NO.	BY	DATE			
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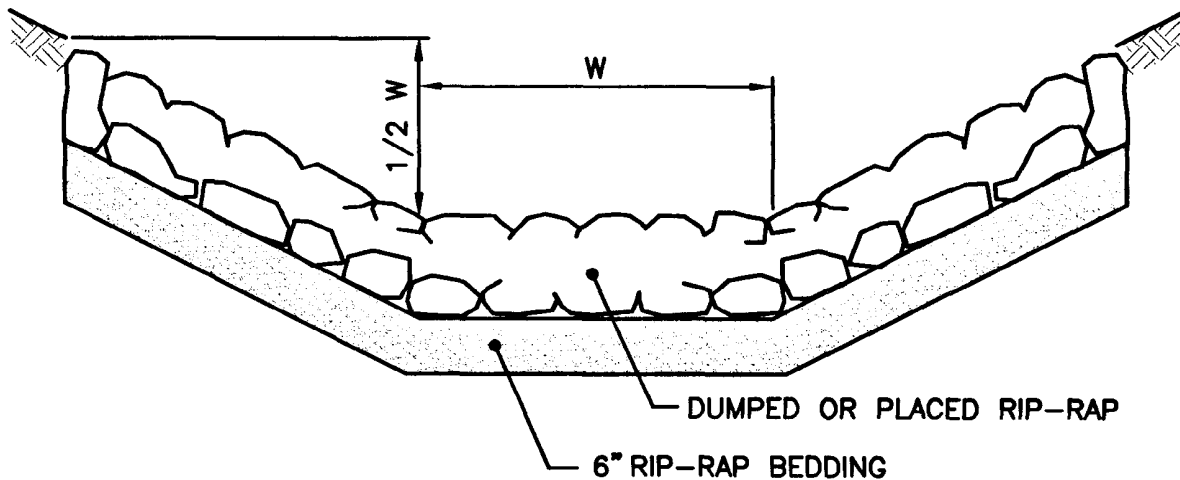


NOTE:

SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BITUMINOUS CONCRETE DITCH		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 8.2.0 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">  CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>		



NOTES:

1. SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.
2. RIP-RAP AND BEDDING SIZE MAY VARY. SEE CONTRACT DOCUMENTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

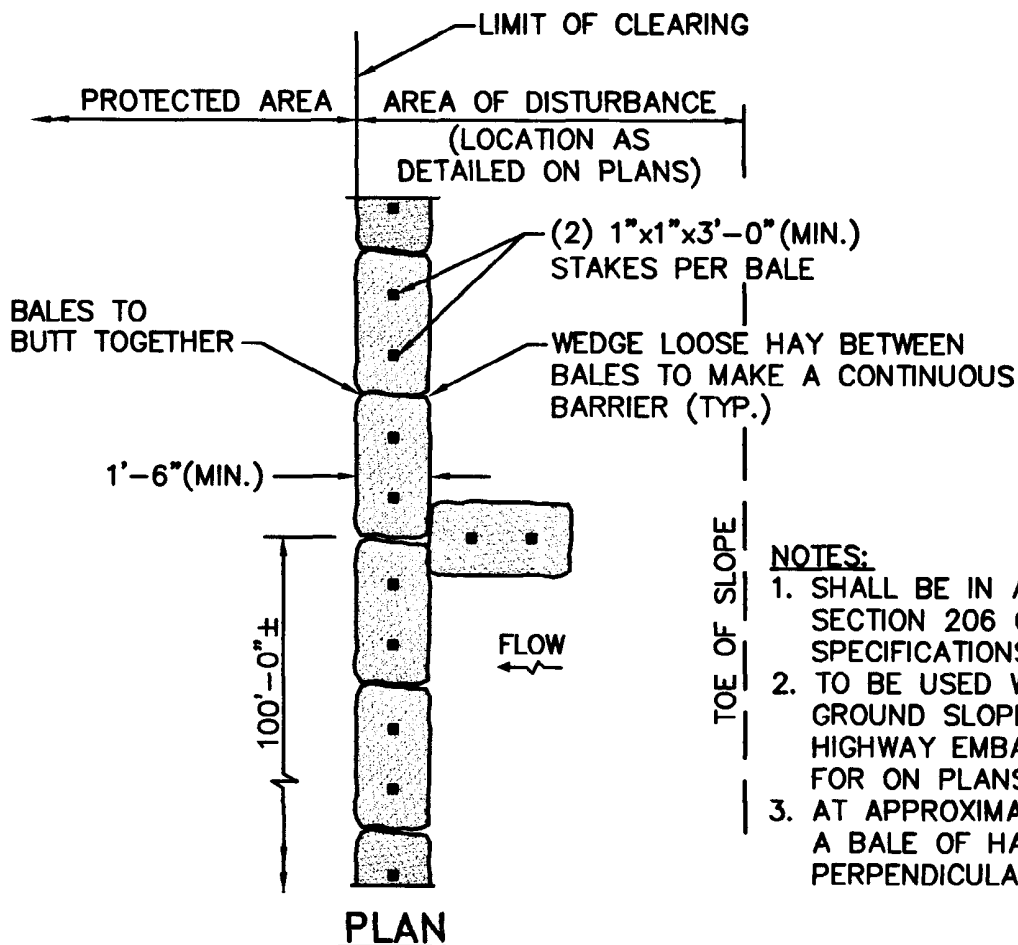
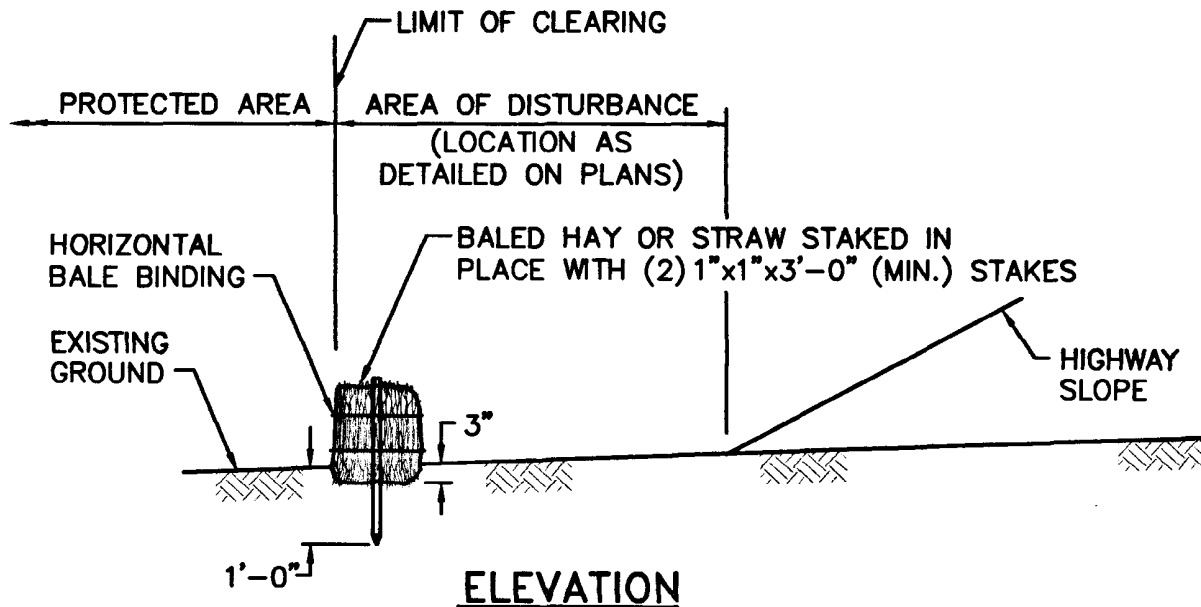
RIP-RAP DITCH

James H. Casabelli
 CHIEF ENGINEER
 TRANSPORTATION

Edmund Parker Jr.
 CHIEF DESIGN ENGINEER
 TRANSPORTATION

JUNE 15, 1998
 ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED WHERE THE EXISTING GROUND SLOPES AWAY FROM THE HIGHWAY EMBANKMENT AS CALLED FOR ON PLANS.
3. AT APPROXIMATE 100'-0" INTERVALS A BALE OF HAY IS TO BUTT PERPENDICULARLY.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

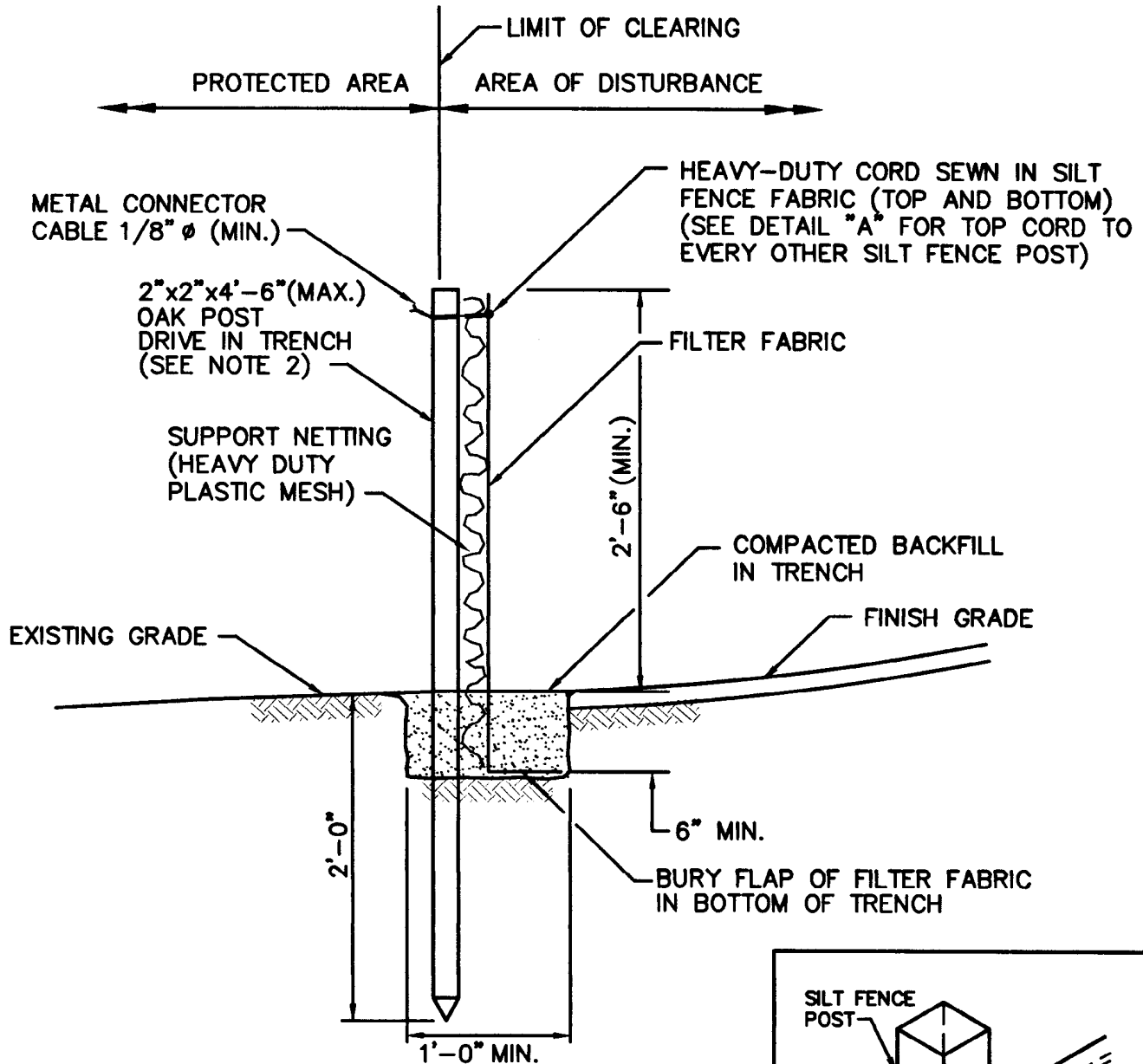
BALED HAY EROSION CHECK

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

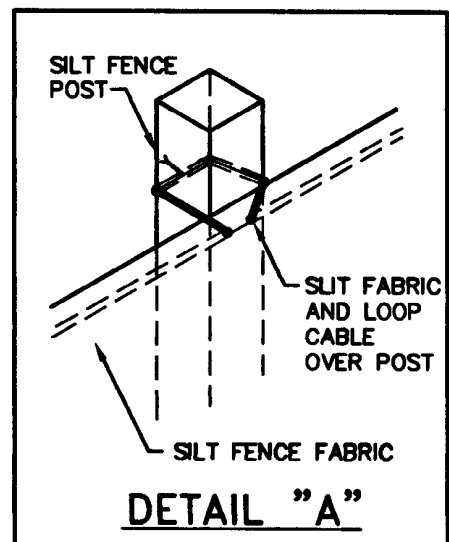
JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SILT FENCE DETAIL

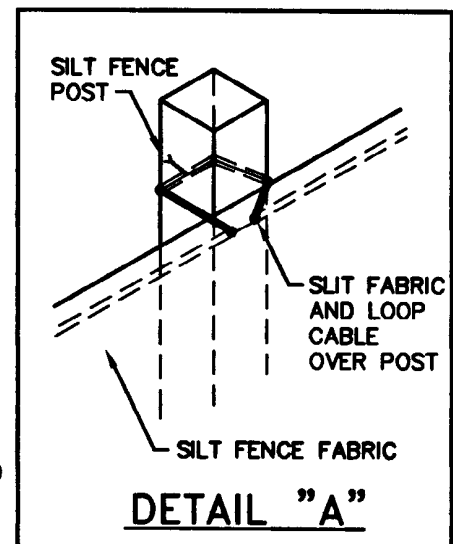
REVISIONS		
NO.	BY	DATE

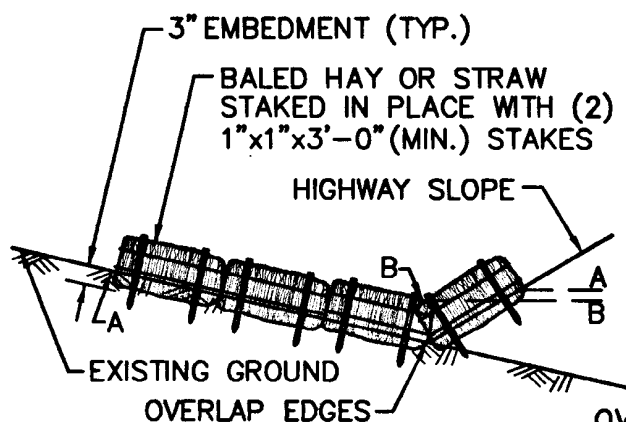
James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

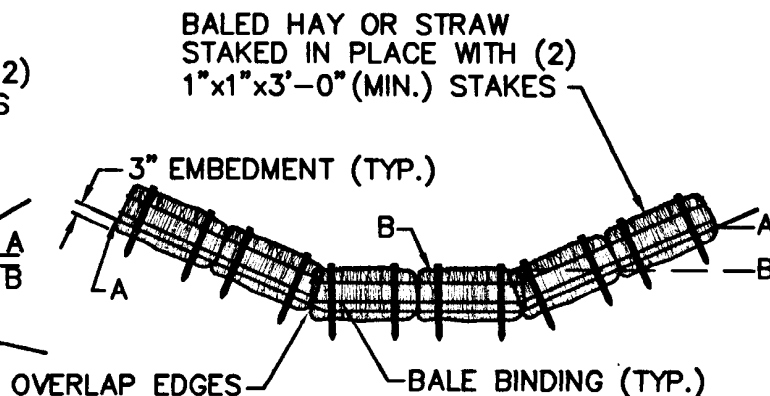
JUNE 15, 1998
ISSUE DATE



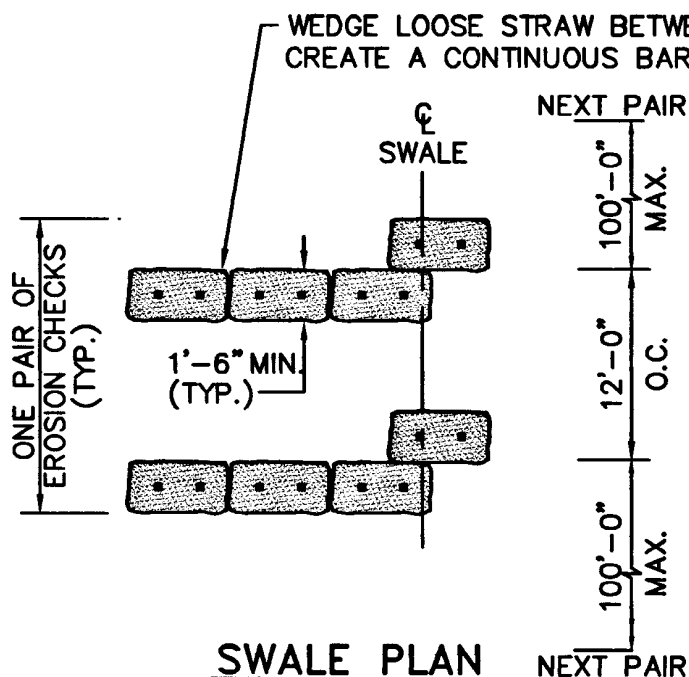




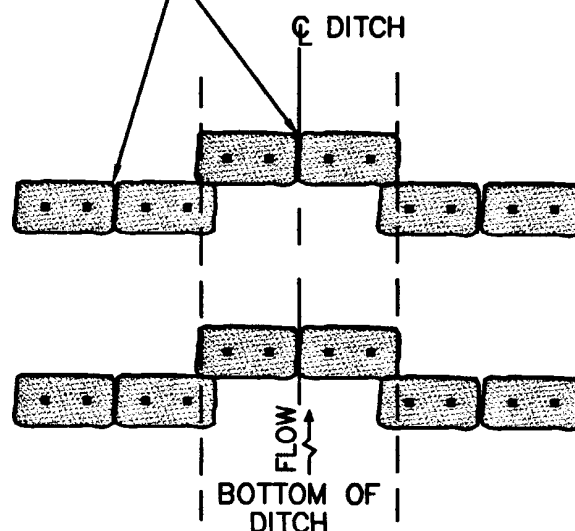
SWALE ELEVATION



DITCH ELEVATION



SWALE PLAN



DITCH PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED IN LOCATIONS WHERE THE EXISTING GROUND SLOPES IN TOWARD THE EMBANKMENT OR IN DRAINAGE DITCHES AS CALLED FOR ON THE PLANS.
3. THE BALES ARE TO BE EMBEDDED A MINIMUM OF 3" INTO THE EXISTING GROUND, HIGHWAY SLOPE OR DITCH SECTION.
4. POINTS "A" SHOULD BE AT A HIGHER ELEVATION THAN POINTS "B".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

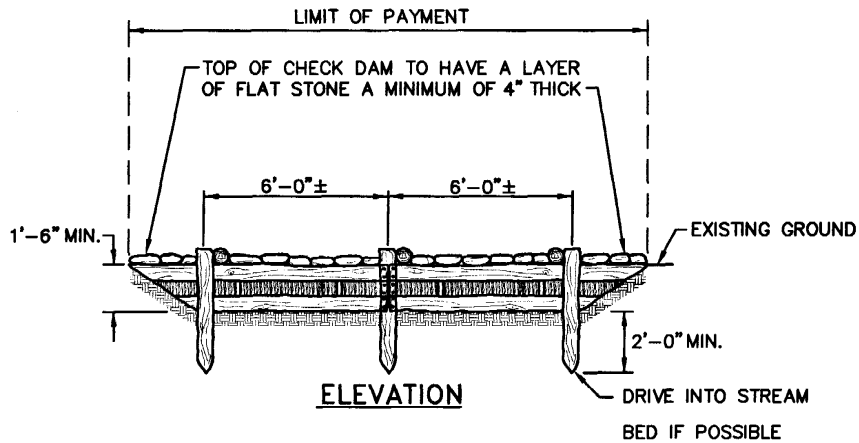
BALED HAY DITCH AND SWALE EROSION CHECK

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

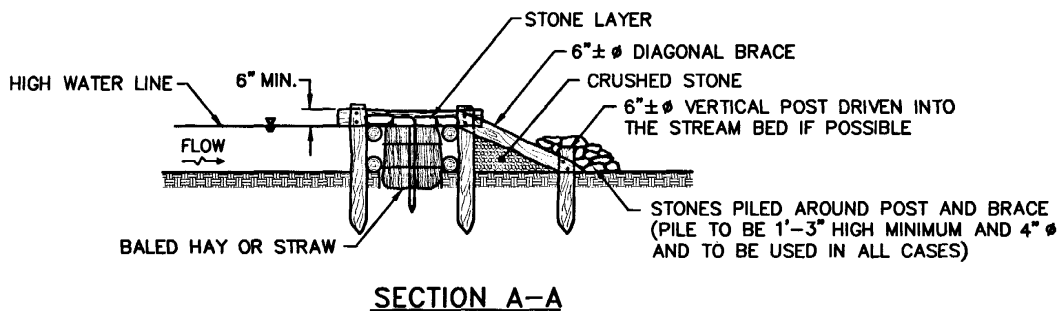
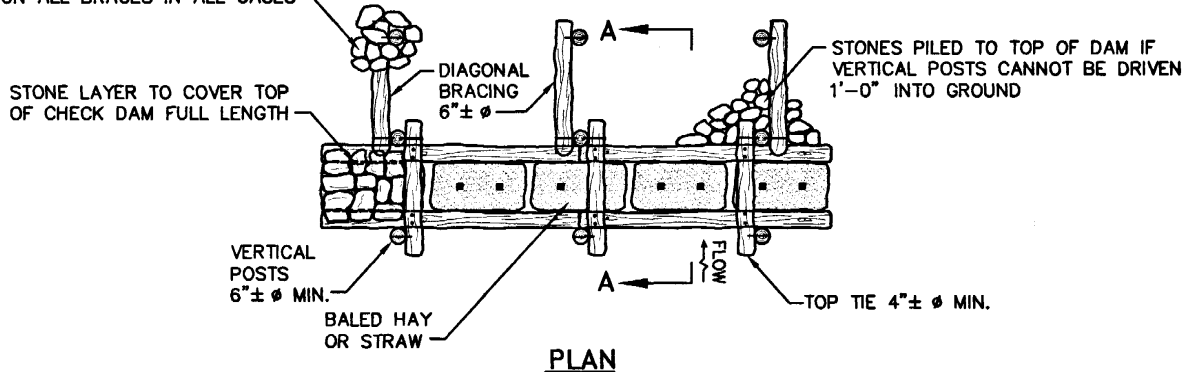
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





PILED STONE TO STABILIZE BRACING
ON ALL BRACES IN ALL CASES

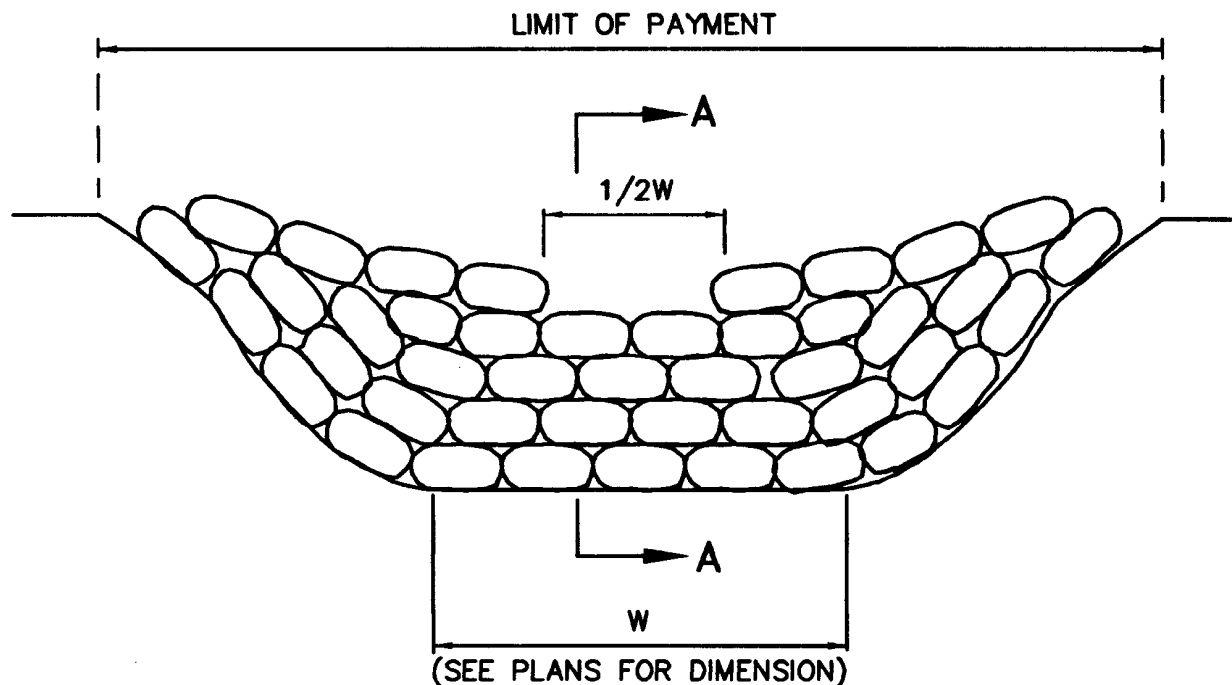


NOTES:

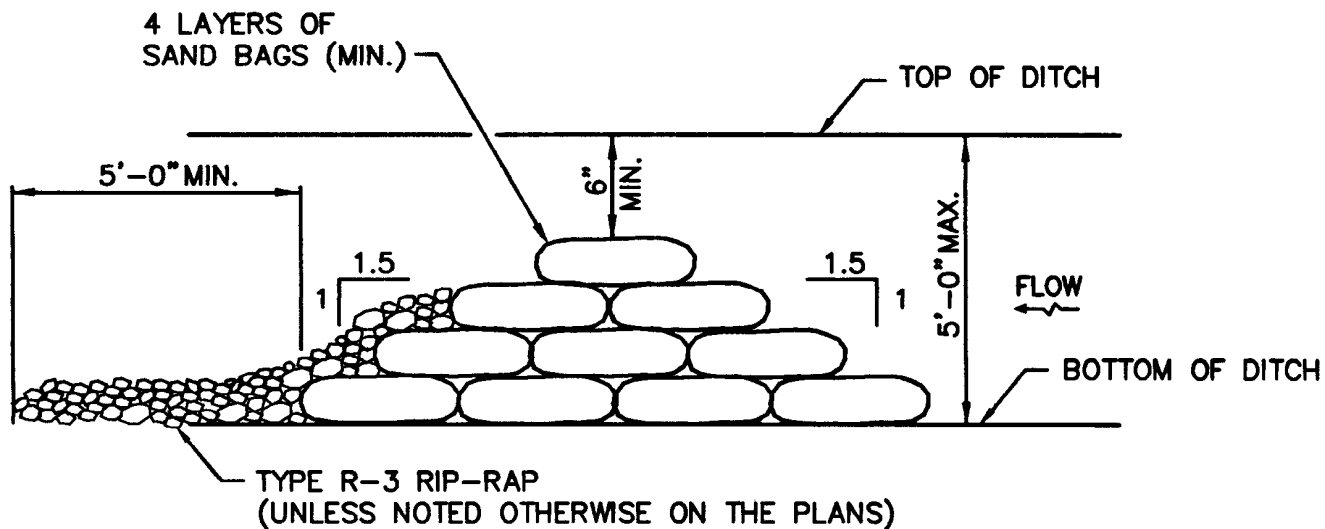
1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. DAM TO BE CONSTRUCTED OF NATIVE LOGS OBTAINED FROM CLEARING OPERATION, WHEN AVAILABLE. ALL LOGS TO BE SPIKED WITH WIRE SPIKES OR BOLTED TOGETHER. EXISTING TREES, BOULDERS OR LEDGE MAY BE USED IN PLACE OF THE THE VERTICAL POSTS AT THE DISCRETION OF THE ENGINEER.
3. WHEN VERTICAL POST CANNOT BE DRIVEN INTO THE STREAM BED, STONES SHALL BE USED TO BRACE THE STRUCTURE.
4. BALES OF HAY TO BE EMBEDDED A MINIMUM OF 6" INTO THE EXISTING GROUND. IF THE EXISTING GROUND IS LEDGE, A 2'-0"x2'-0" WEDGE OF CRUSHED STONE IS TO BE PLACED AGAINST THE UPSTREAM FACE OF THE CHECK DAM.
5. HEIGHT OF THE DAM WILL VARY BASED ON HIGH WATER LEVEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			LOG AND HAY CHECK DAM		<div><div>R.I. STANDARD 9.5.0</div></div>
NO.	BY	DATE			
			<div><div><div>John A. Capelli</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Porter Jr</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>		



ELEVATION



SECTION A-A

NOTE:

SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SAND BAG EROSION CHECK

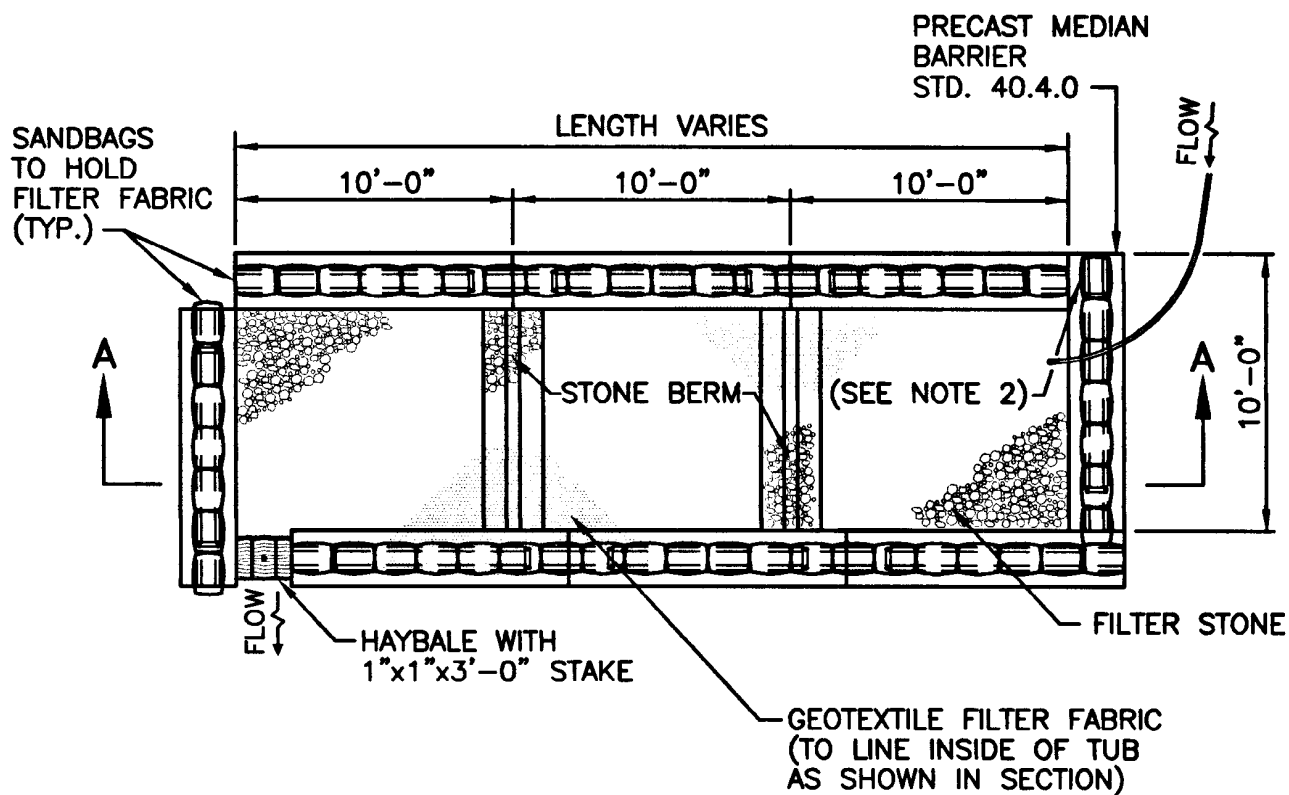
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

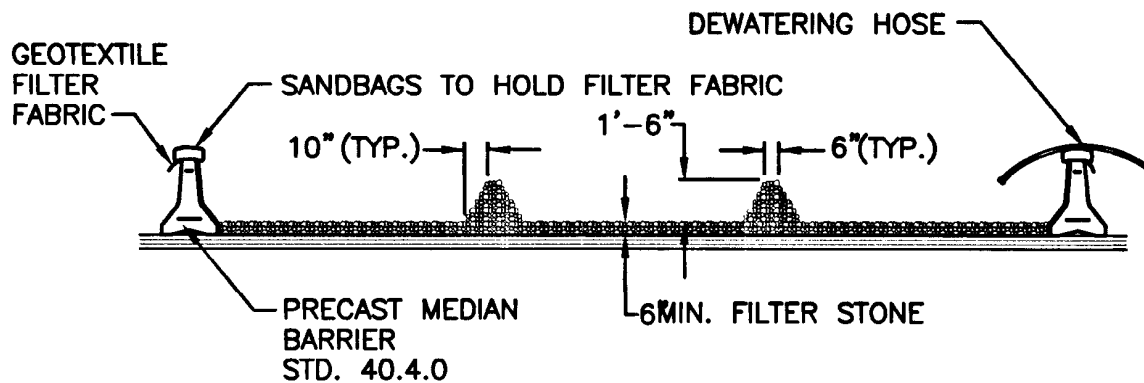
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





PLAN



SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 208 OF THE R.I. STANDARD SPECIFICATIONS.
2. PROVIDE ADDITIONAL SAND BAGS AS REQUIRED TO FILL SPACE BETWEEN ADJACENT BARRIERS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

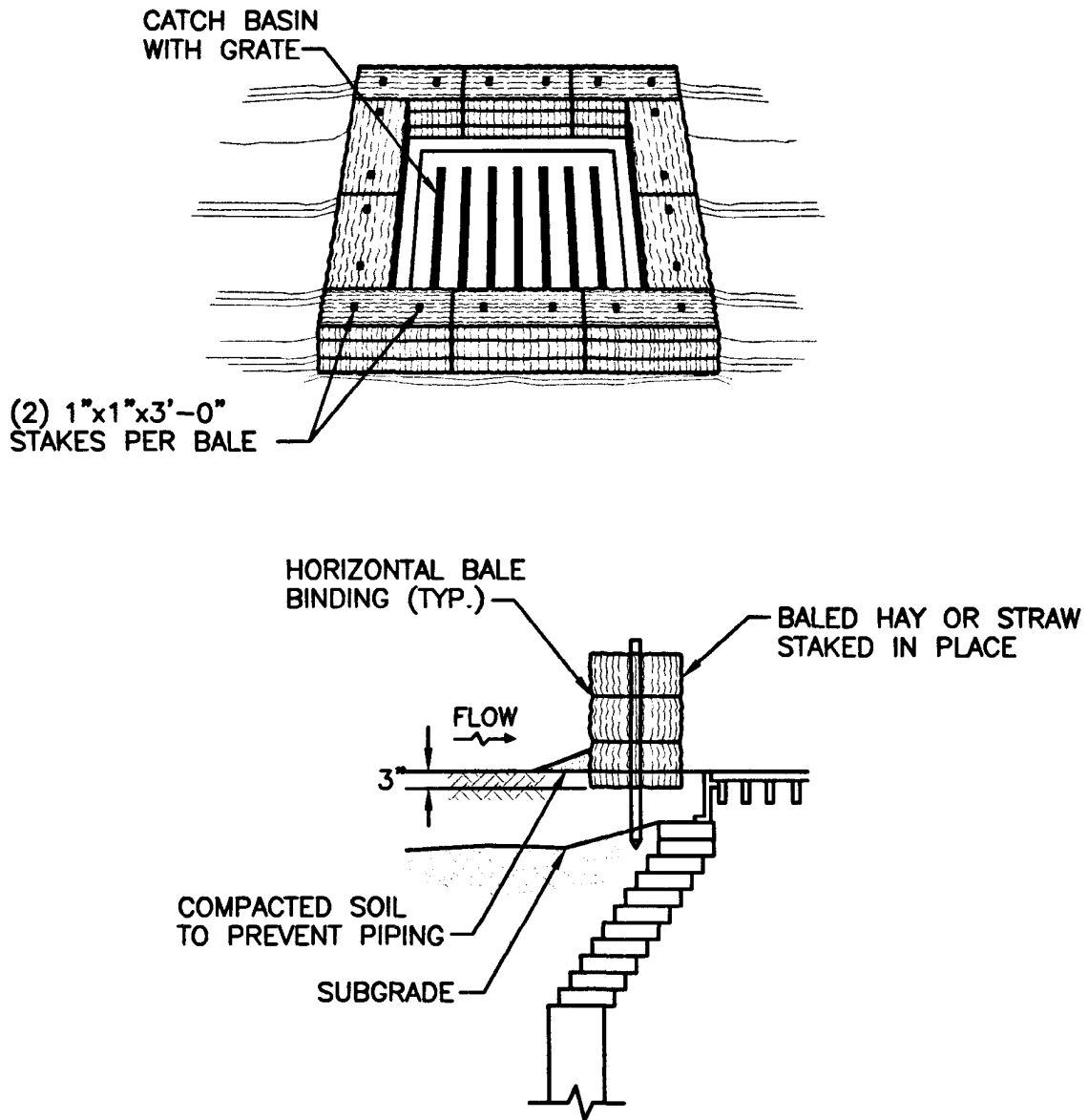
DEWATERING BASIN

John A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





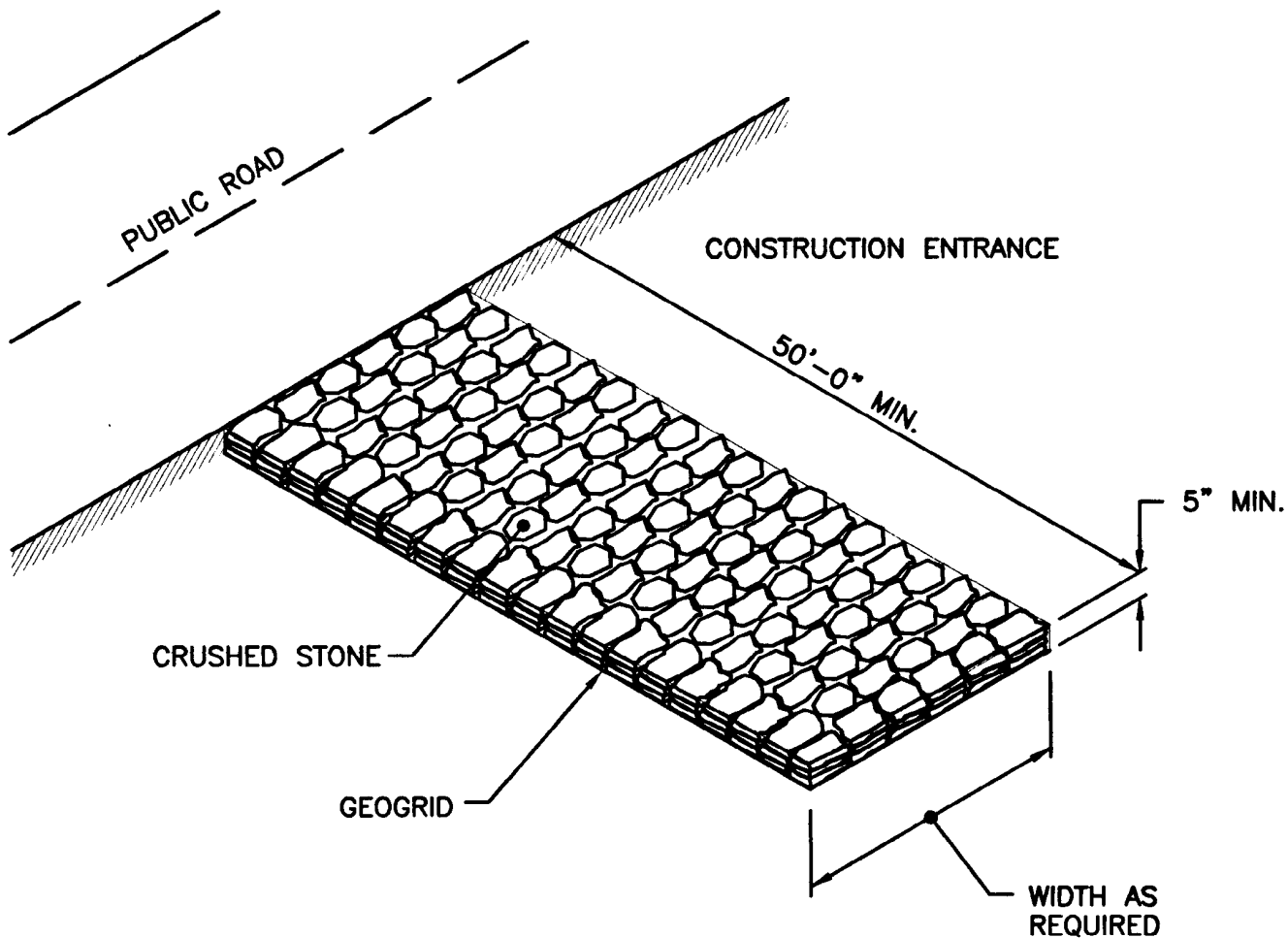


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 209 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS INLET PROTECTION CAN ALSO BE USED WHEN CONSTRUCTION SEQUENCING REQUIRES A CATCH BASIN TO BE EXPOSED TO SEDIMENT FROM THE SUBGRADE. THIS WILL BE ACHIEVED BY INSTALLING THE BALED HAY AS SHOWN ON THIS DETAIL INTO THE SUBGRADE.
3. THE PERIMETER CONFIGURATION OF THE BALED HAY WILL VARY DEPENDING ON THE PARTICULAR TYPE OF CATCH BASIN INLET BEING CONSTRUCTED. THE ENGINEER WILL PROVIDE SPECIFIC DIRECTION IN SUCH CASES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BALED HAY CATCH BASIN INLET PROTECTION		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 9.8.0 </div>	
NO.	BY	DATE				
			 CHIEF ENGINEER TRANSPORTATION			 CHIEF DESIGN ENGINEER TRANSPORTATION



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

CONSTRUCTION ACCESS

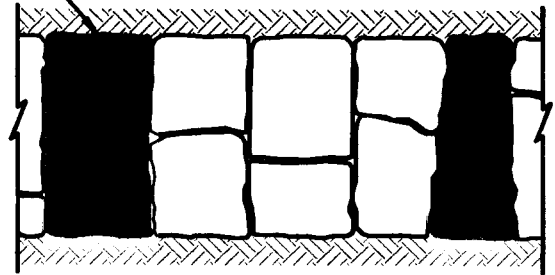
James H. Casella
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

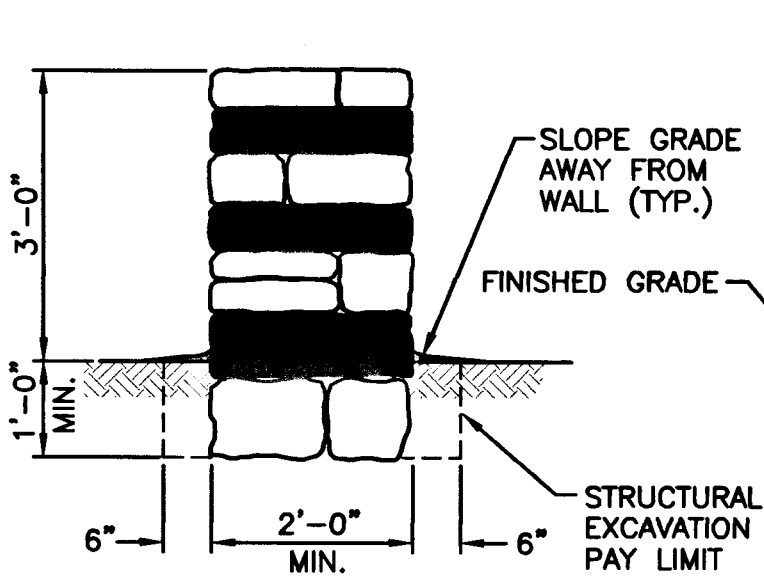
JUNE 15, 1998
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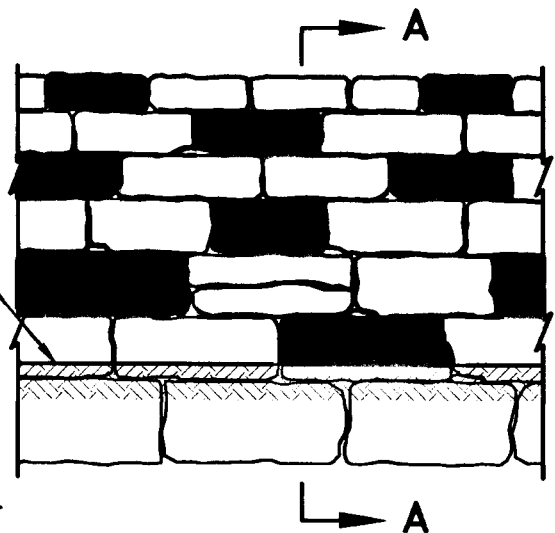
TIE STONE (TYP.)



PLAN



SECTION A-A



ELEVATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 912 OF THE R.I. STANDARD SPECIFICATIONS.
2. TIE STONES SHALL BE PLACED A MAXIMUM OF 4'-0" O.C.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RUBBLE MASONRY WALL

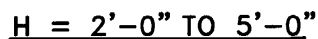
REVISIONS		
NO.	BY	DATE

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

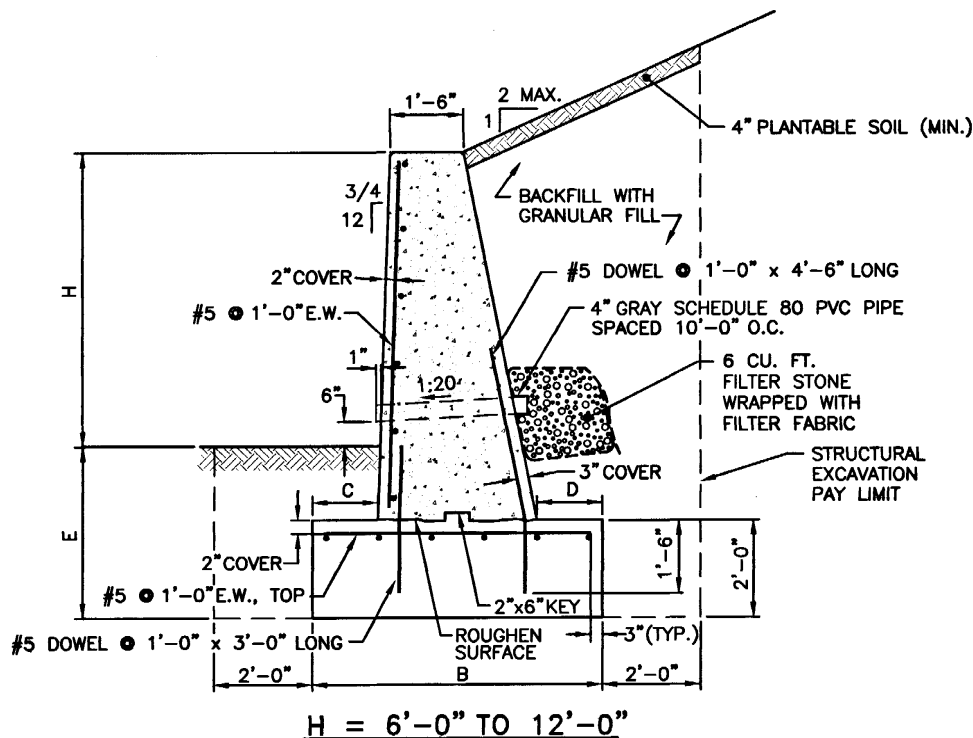
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
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DIMENSIONS AND QUANTITIES						
H	A	B	C	D	E	C.F./L.F. OF WALL
2'-0"	3'-3"	—	—	—	2'-6"	10.69
3'-0"	3'-8"	—	—	—	2'-6"	14.21
4'-0"	4'-1"	—	—	—	2'-6"	18.14
5'-0"	4'-6"	—	—	—	2'-6"	22.50
6'-0"	—	5'-4"	1'-0"	1'-4"	3'-6"	27.54
7'-0"	—	6'-2"	1'-4"	1'-4"	3'-6"	33.59
8'-0"	—	6'-5"	1'-4"	1'-6"	3'-6"	36.98
9'-0"	—	7'-4"	1'-9"	1'-9"	3'-6"	42.66
10'-0"	—	7'-10"	1'-9"	2'-0"	3'-6"	47.76
11'-0"	—	8'-5"	1'-10"	2'-3"	3'-6"	53.30
12'-0"	—	9'-0"	1'-10"	2'-6"	3'-6"	59.63



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 808 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE 1/2" PREFORMED JOINT FILLER AND BEVEL EXPOSED EDGES WITH 3/4" CHAMFER.
3. SEAL BACKFACE WITH 1/4"x1/2" JOINT SEALANT.
4. SURFACE RUB EXPOSED FACE AND TOP.
5. ALL REINFORCING TO BE EPOXY COATED.
6. PROVIDE EXPANSION JOINTS EVERY 25'-0" IN STEMS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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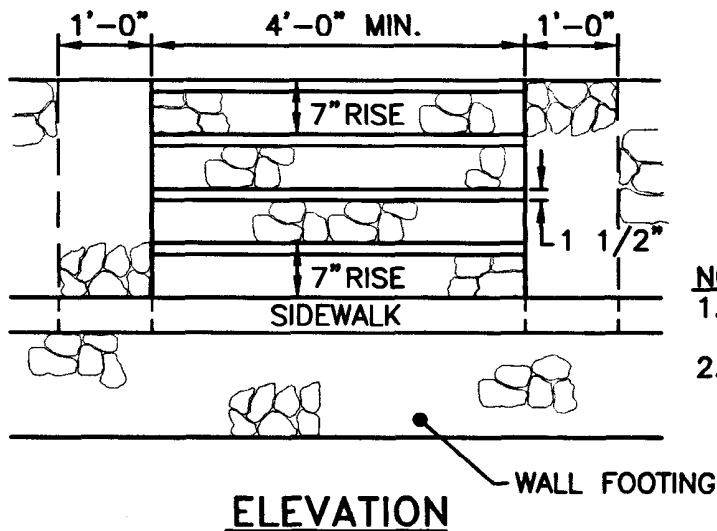
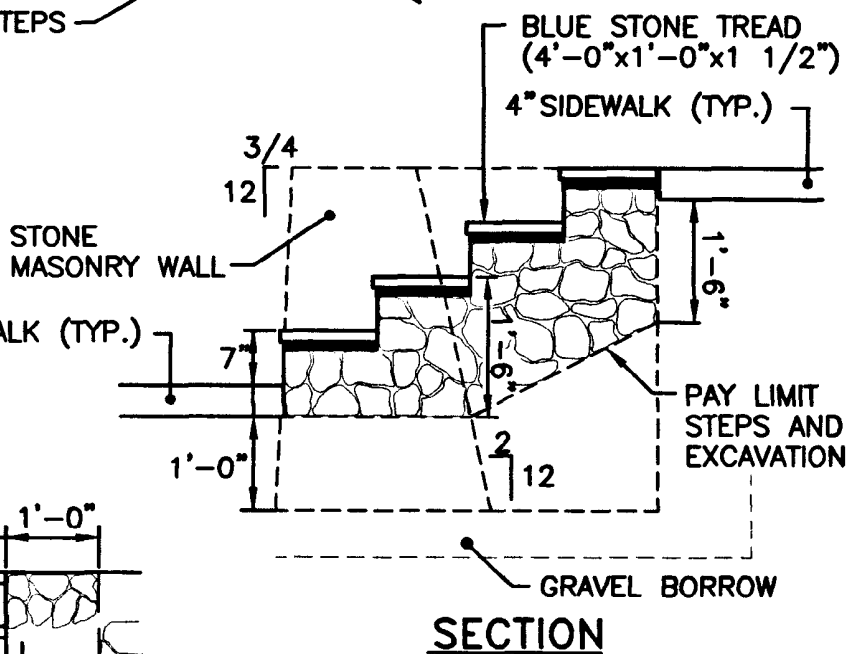
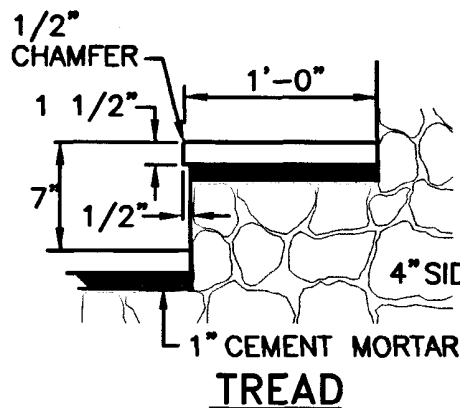
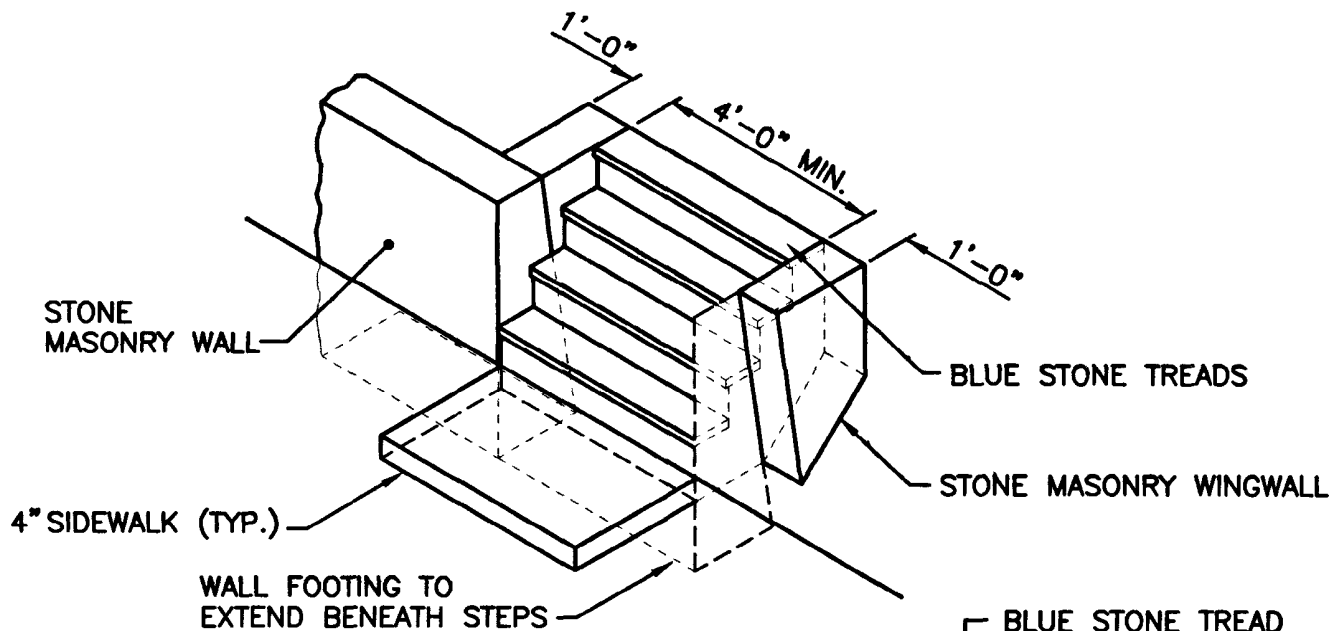
CONCRETE RETAINING WALL

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

**R.I.
STANDARD
10.3.0**



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 911 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED TOP EDGES OF TREADS TO HAVE 1/2" CHAMFER (SAW OR TOOLED).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STONE MASONRY STEPS

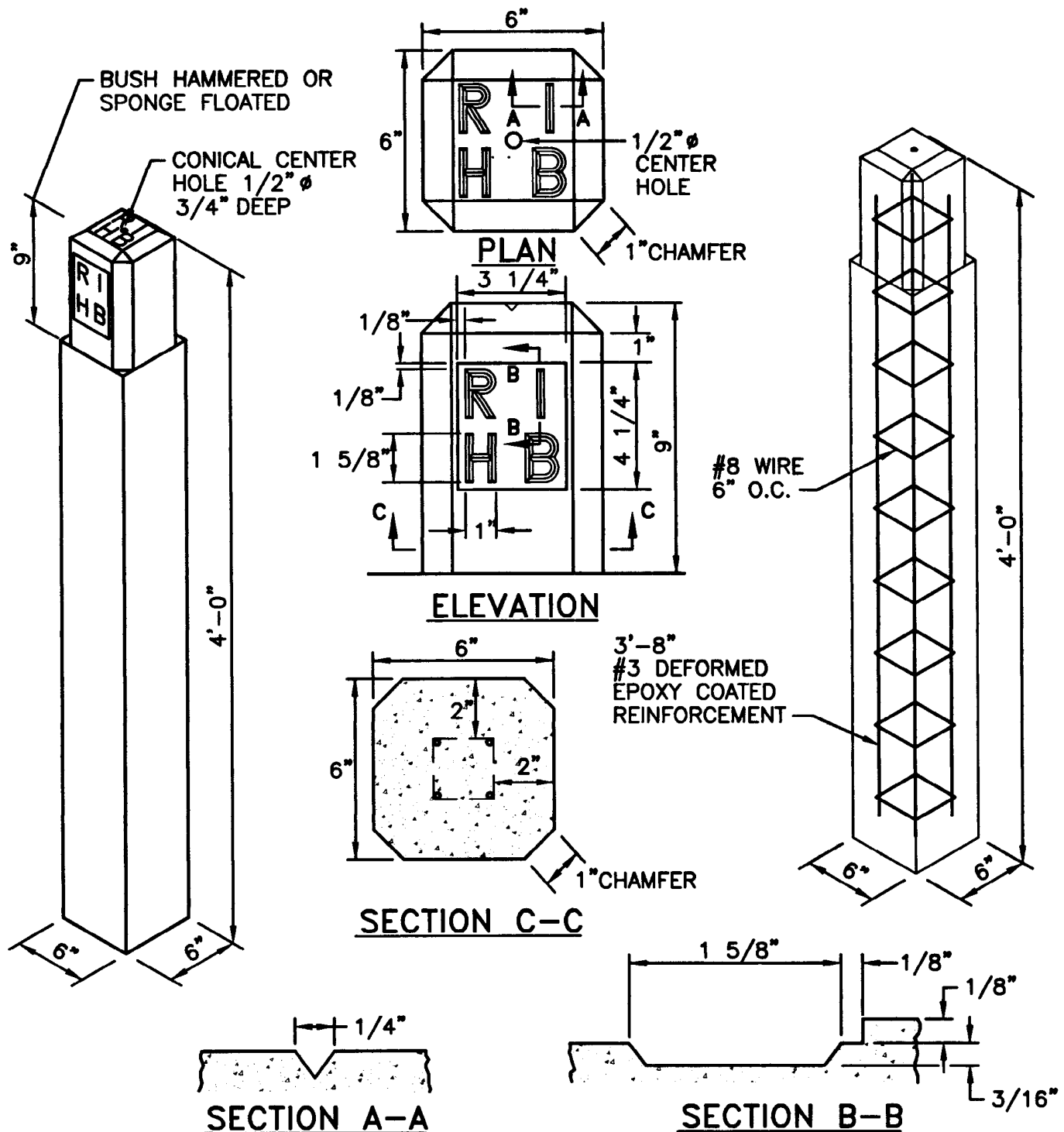
REVISIONS		
NO.	BY	DATE

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. #3 DEFORMED EPOXY COATED REINFORCEMENT TO CLEAR TOP AND BOTTOM BY 2".
3. #8 EPOXY COATED WIRE TO CLEAR TOP AND BOTTOM BY 3".
4. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE HIGHWAY BOUND

REVISIONS

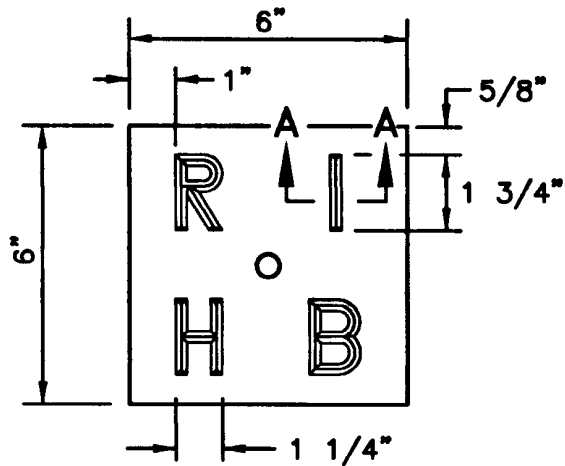
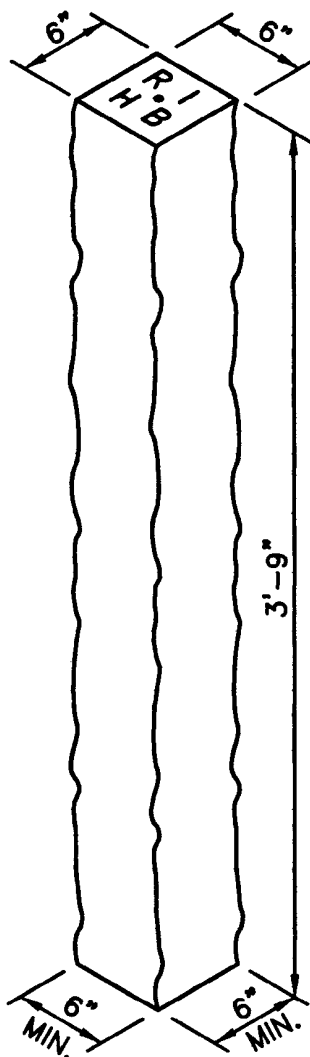
NO.	BY	DATE

James H. Capaldi
 CHIEF ENGINEER
 TRANSPORTATION

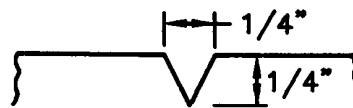
Edmund Parker Jr.
 CHIEF DESIGN ENGINEER
 TRANSPORTATION

JUNE 15, 1998
 ISSUE DATE

R.I.
 STANDARD
 14.1.0



PLAN



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. BOUND TO BE QUARRY SPLIT FROM FINE GRAIN GRANITE FREE FROM NATURAL FRACTURES, SEAMS, LAMINATIONS, CRACKS OR IMPURITIES.
3. TOP SURFACE OF BOUND TO BE DRESSED OR SAWED.
4. CONICAL DRILL HOLE IN CENTER OF TOP TO BE 1/4" ϕ AND 3/4" DEEP.
5. BOTTOM TO BE AT LEAST 6" SQUARE AND FLAT.
6. LETTERS "RIHB" ON TOP TO BE OF DIMENSIONS AS SHOWN.
7. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

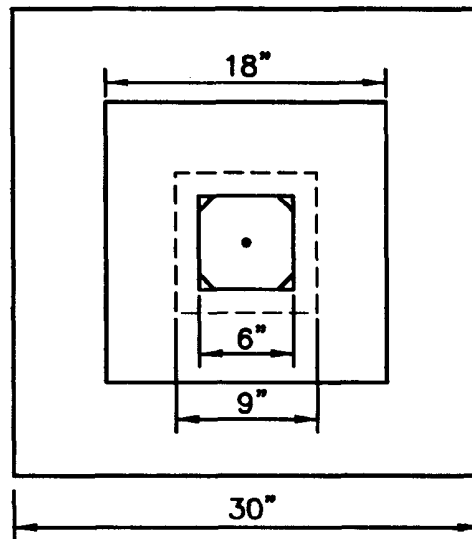
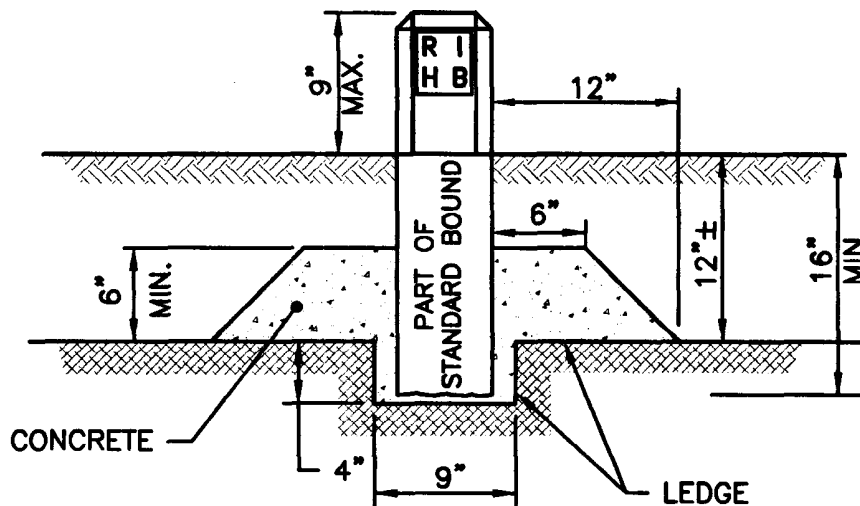
GRANITE HIGHWAY BOUND

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE STD. 14.1.0 OR STD. 14.2.0 FOR DETAILS OF BOUND.
3. 9" SQUARE HOLE, 4" DEEP TO BE CHIPPED IN LEDGE.
4. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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**HIGHWAY BOUND
SET IN CONCEALED LEDGE**

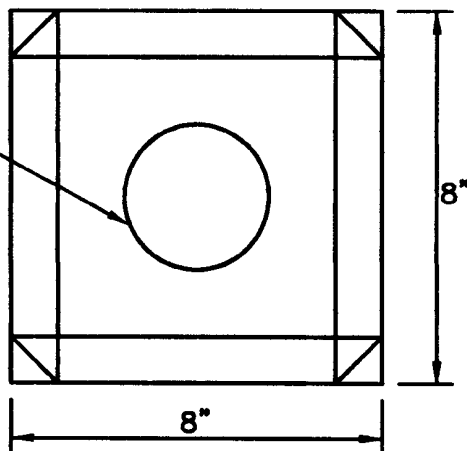
James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



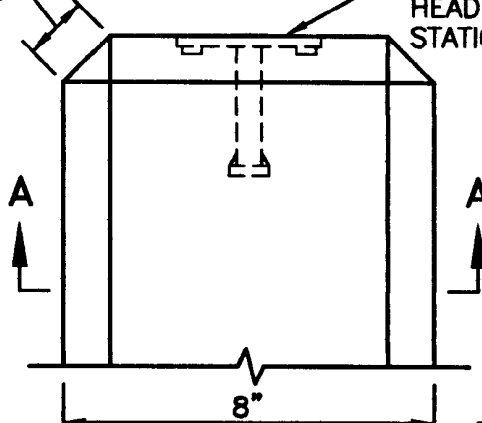
STANDARD BENCH MARK
OR TRIANGULATION STATION



PLAN

STANDARD BENCH MARK
HEAD OR TRIANGULATION
STATION

1" CHAMFER



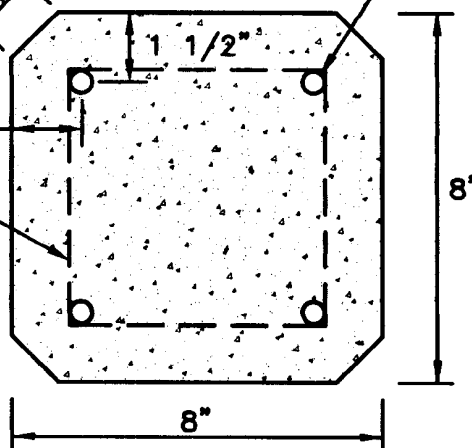
ELEVATION

1" CHAMFER

#3 DEFORMED
EPOXY COATED
REINFORCEMENT
4'-9" LONG, SET
TO CLEAR TOP AND
BOTTOM OF BOUND
BY 1 1/2"

1 1/2"

#8 WIRE



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. MONUMENTS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**REINFORCED CONCRETE
PRECISE LEVEL MONUMENT**

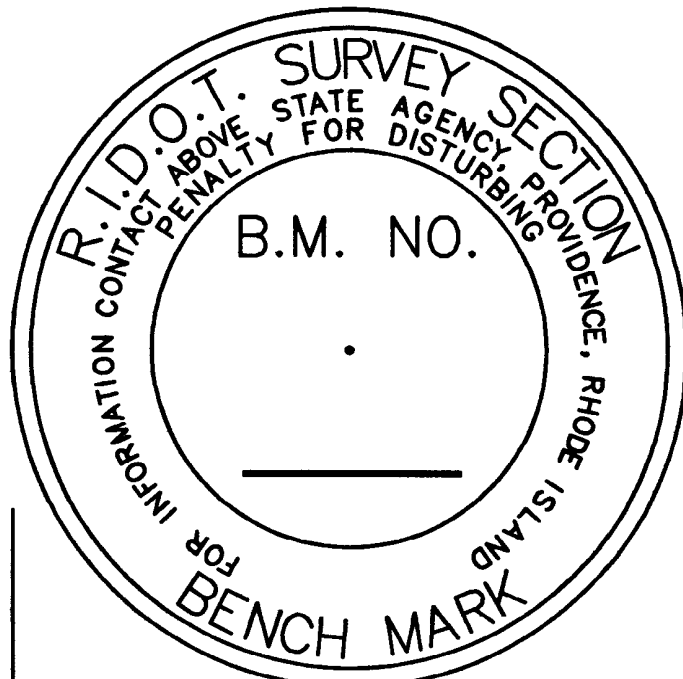
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

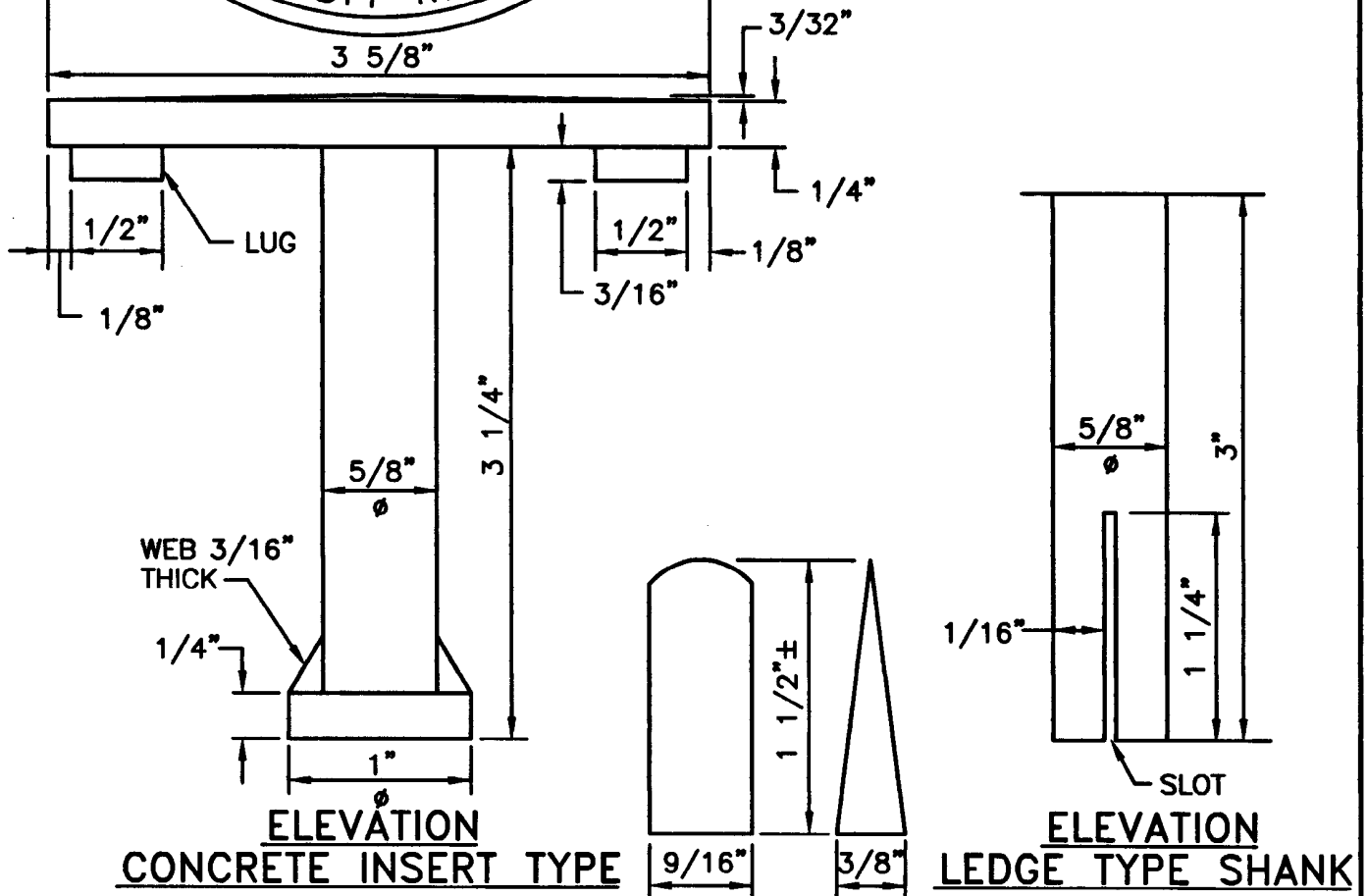
JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. OUTER LETTERS: 1/4" HIGH
3/64" STROKE
1/32" INSET
3. MIDDLE LETTERS: 1/4" HIGH
1/32" STROKE
1/64" INSET
4. INNER LETTERS: 3/32" HIGH
1/32" STROKE
1/64" INSET
5. CIRCLES: 1/32" STROKE
1/64" INSET
CENTER PUNCHMARK- 1/32" INSET



STEEL WEDGE FOR LEDGE SHANK

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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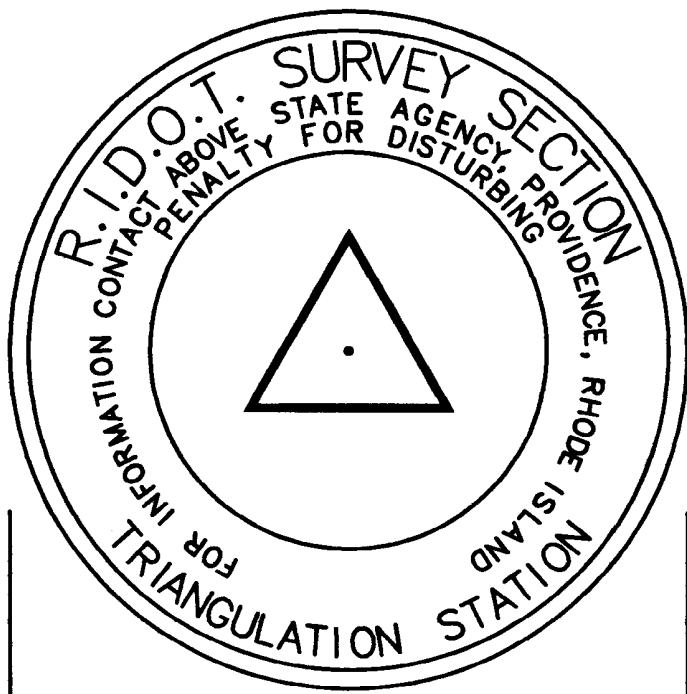
STANDARD BENCH MARK HEADS

James H. Capelli
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

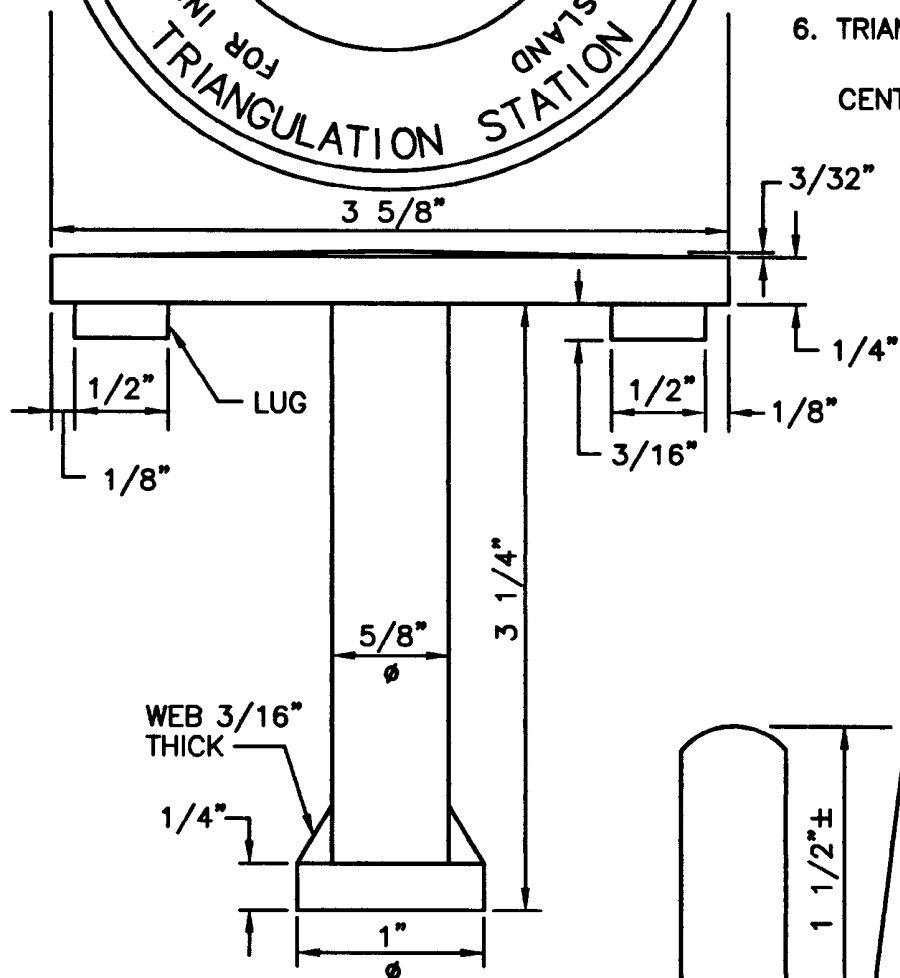
JUNE 15, 1998
ISSUE DATE



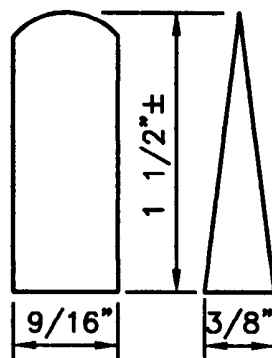


NOTES:

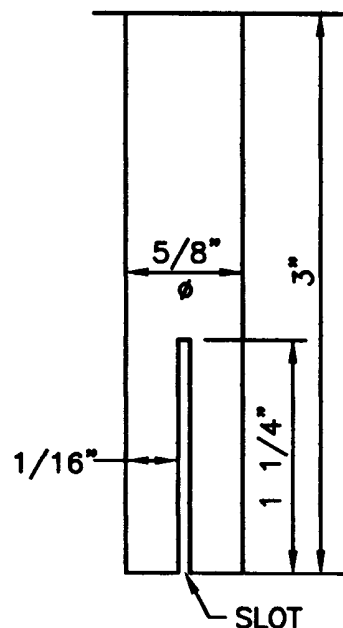
1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. OUTER LETTERS: 1/4" HIGH
3/64" STROKE
1/32" INSET
3. MIDDLE LETTERS: 1/8" HIGH
1/32" STROKE
1/64" INSET
4. INNER LETTERS: 3/32" HIGH
1/32" STROKE
1/64" INSET
5. CIRCLES: 1/32" STROKE
1/64" INSET
6. TRIANGLE: 3/64" STROKE
1/32" INSET
CENTER PUNCHMARK - 1/32" INSET



**TRIANGULATION
CONCRETE INSERT TYPE**



STEEL WEDGE FOR LEDGE SHANK



**TRIANGULATION
LEDGE TYPE SHANK**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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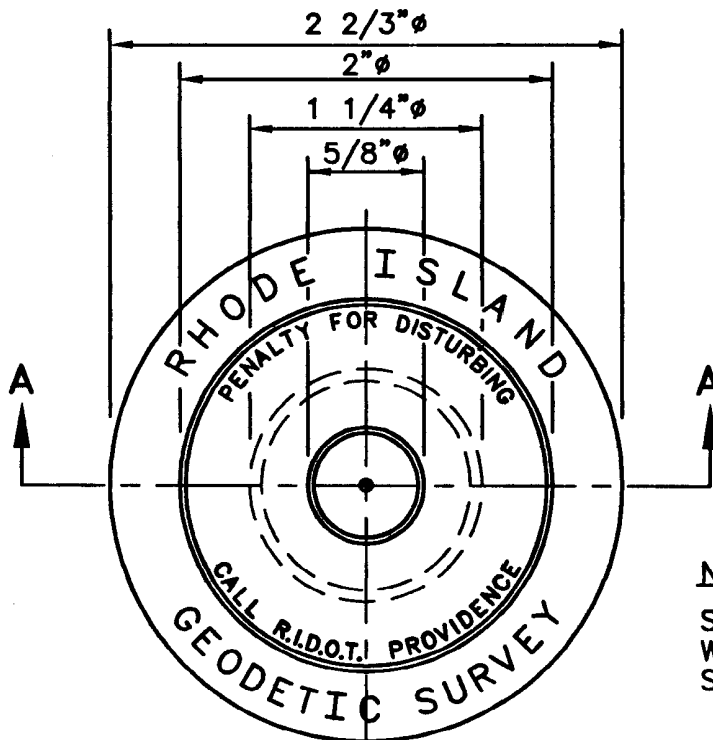
STANDARD MARKER TRIANGULATION STATION

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

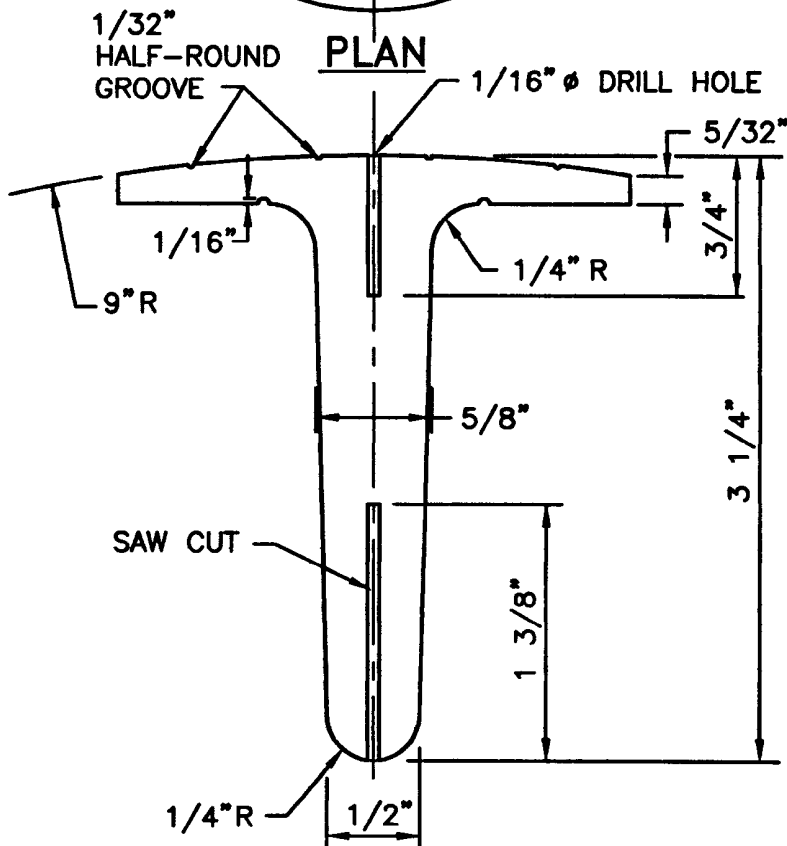
JUNE 15, 1998
ISSUE DATE





NOTE:

SHALL BE IN ACCORDANCE
WITH SECTION 915 OF THE R.I.
STANDARD SPECIFICATIONS.



SECTION A-A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

GEODETIC SURVEY DISK

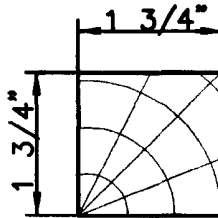
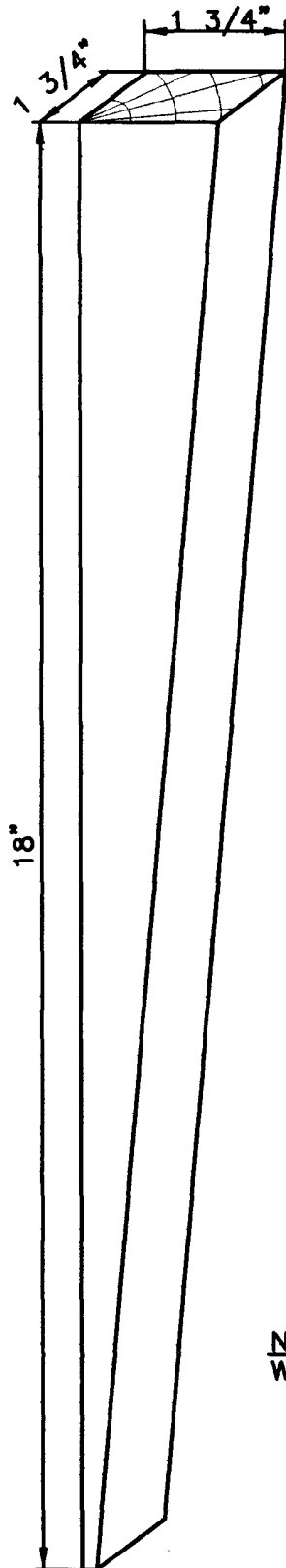
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James H. Casabelli
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

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PLAN

NOTE:
WEDGE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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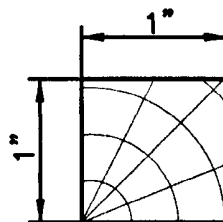
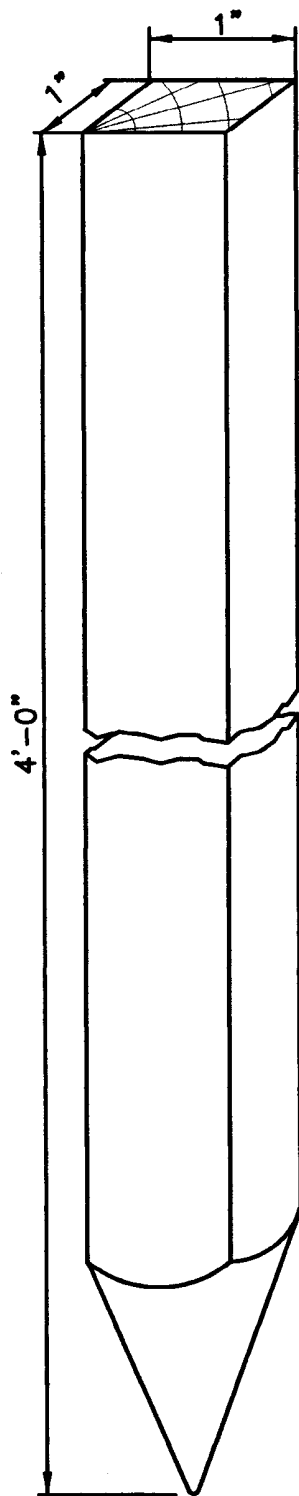
SURVEY WEDGE

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





PLAN

NOTE:
STAKE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

NO.	BY	DATE

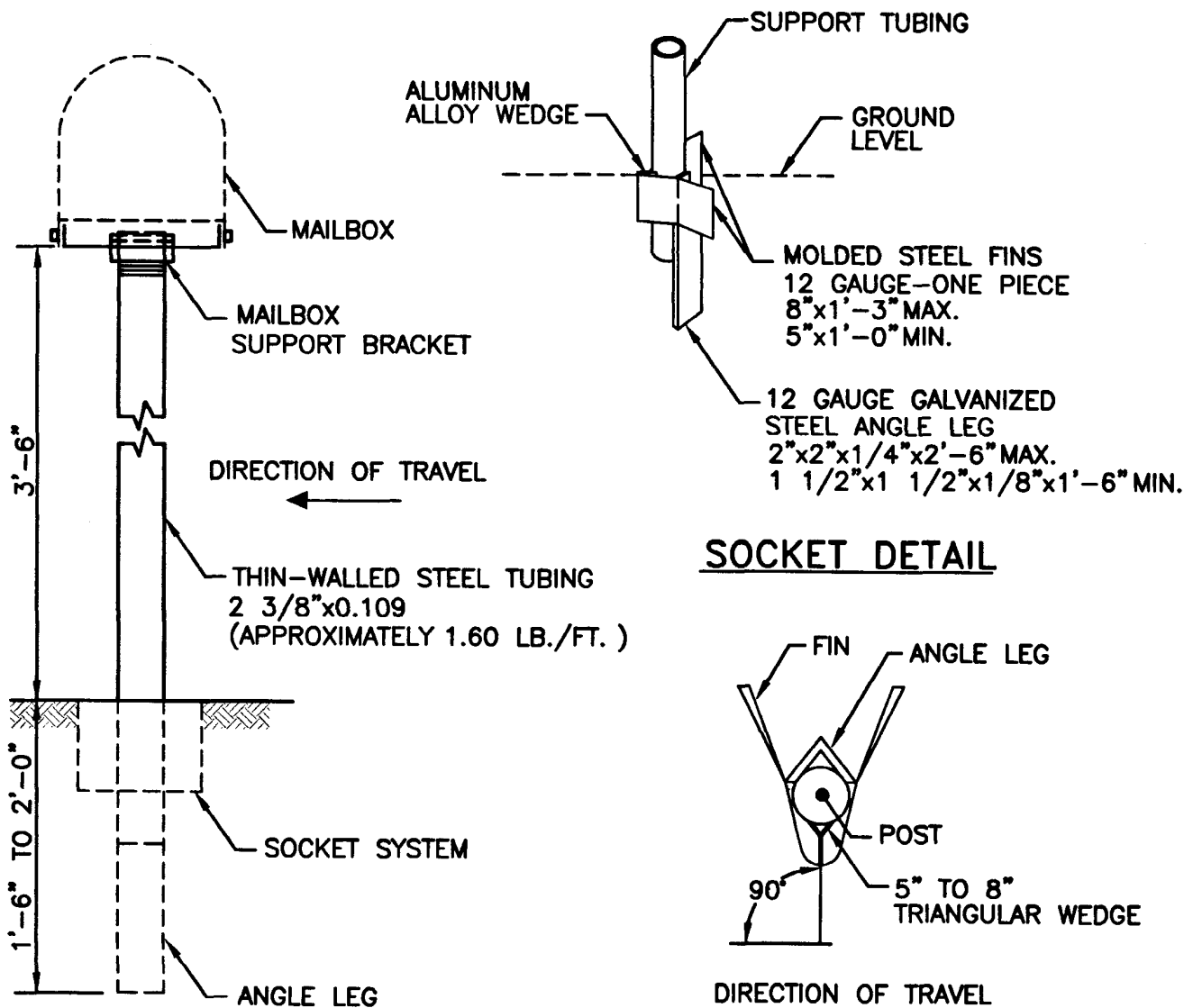
SURVEY STAKE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
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R.I.
STANDARD
14.5.1



SOCKET DETAIL

SOCKET PLAN VIEW

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR WILL REPLACE EXISTING BOX IF BOX DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER ADVICE OF LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED, THE MINIMUM SPACING OF SUPPORT POSTS SHALL BE 3'-0".
6. USE 8-0.1875"x0.75" BOLTS WITH LOCKWASHERS FOR ALL SIZE BOXES (4 EACH SIDE).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

POST AND MOUNTING FOR RURAL MAILBOX

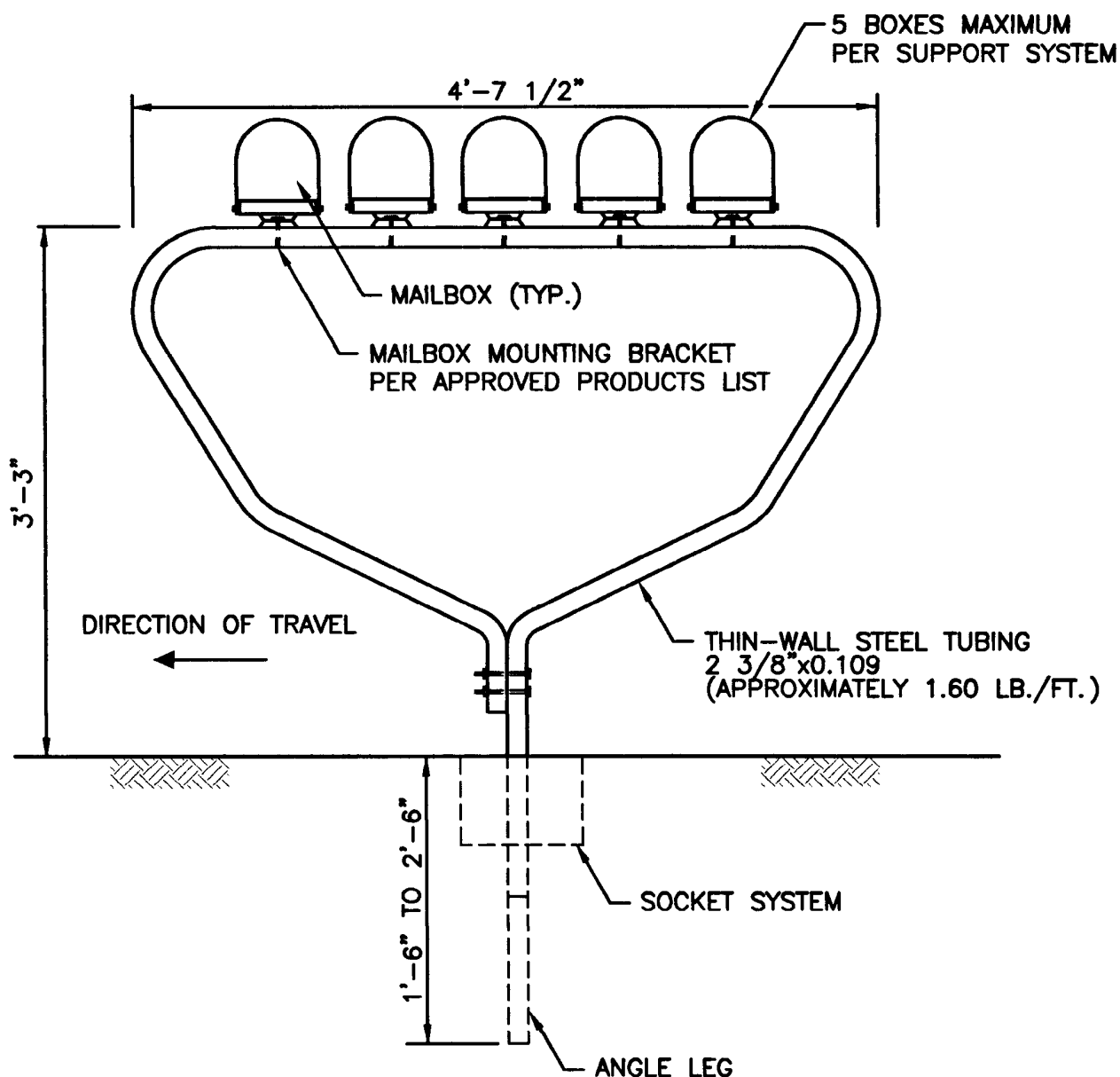
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James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL REPLACE EXISTING BOX IF IT DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER THE ADVICE OF THE LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED THE MINIMUM SPACING OF THE SUPPORT POSTS SHALL BE 4'-7 1/2".
6. FOR SOCKET SYSTEM DETAILS SEE STD. 15.1.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**POST AND MULTIPLE MOUNTINGS
FOR RURAL MAILBOXES**

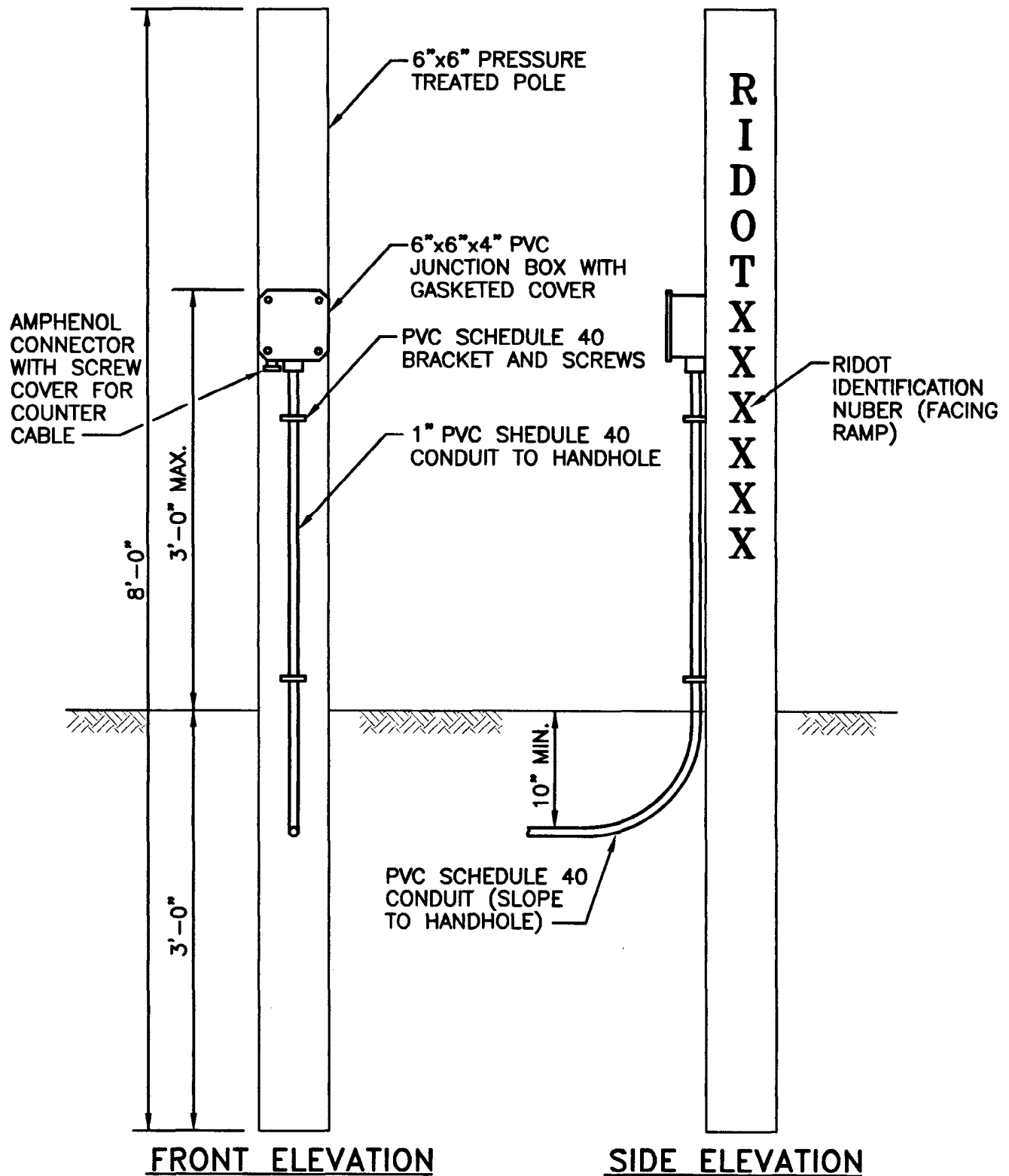
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CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION SINGLE JUNCTION BOX WOOD POST DETAIL

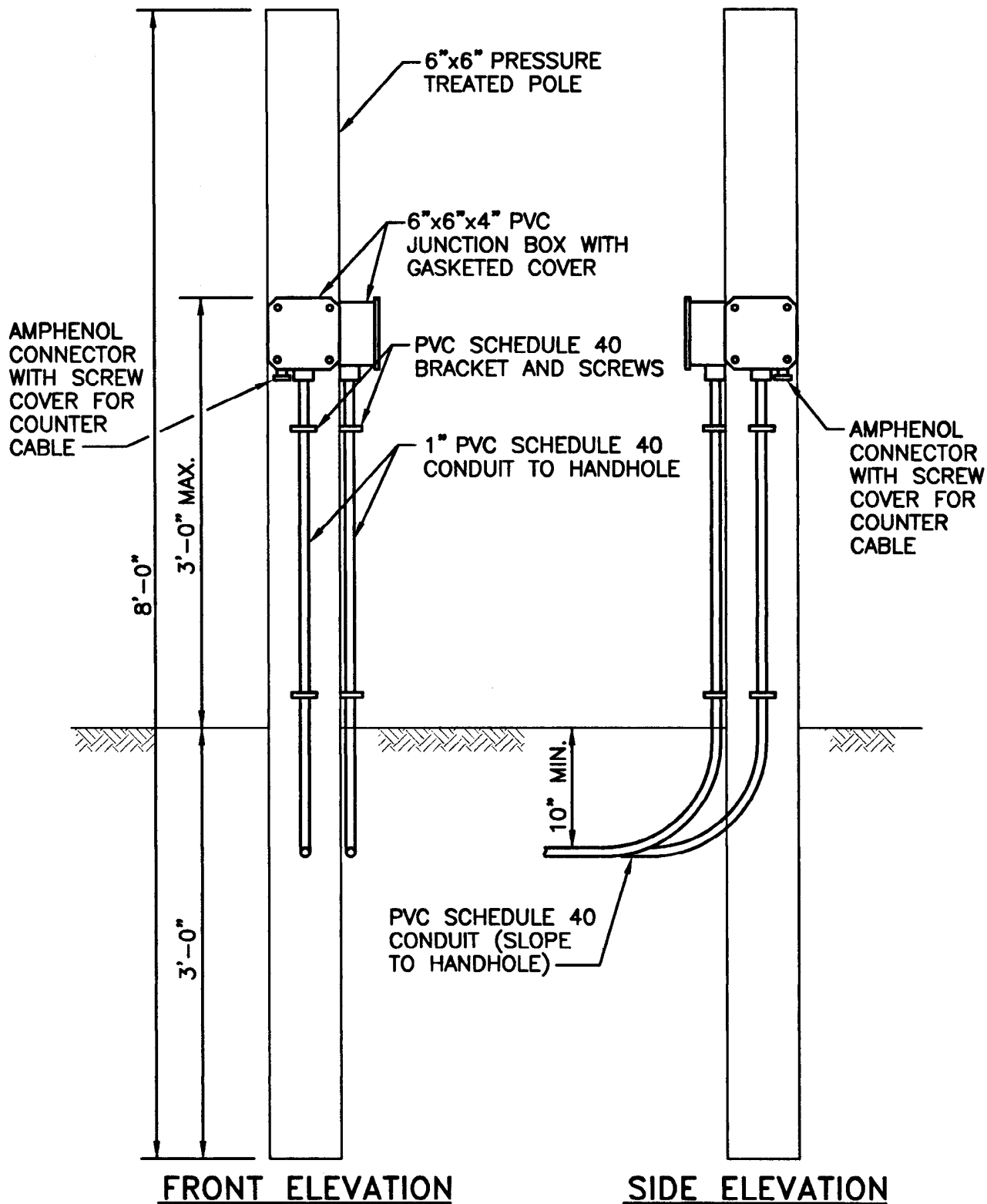
REVISIONS		
NO.	BY	DATE

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TRANSPORTATION

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TRANSPORTATION

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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION DOUBLE JUNCTION BOX WOOD POST DETAIL

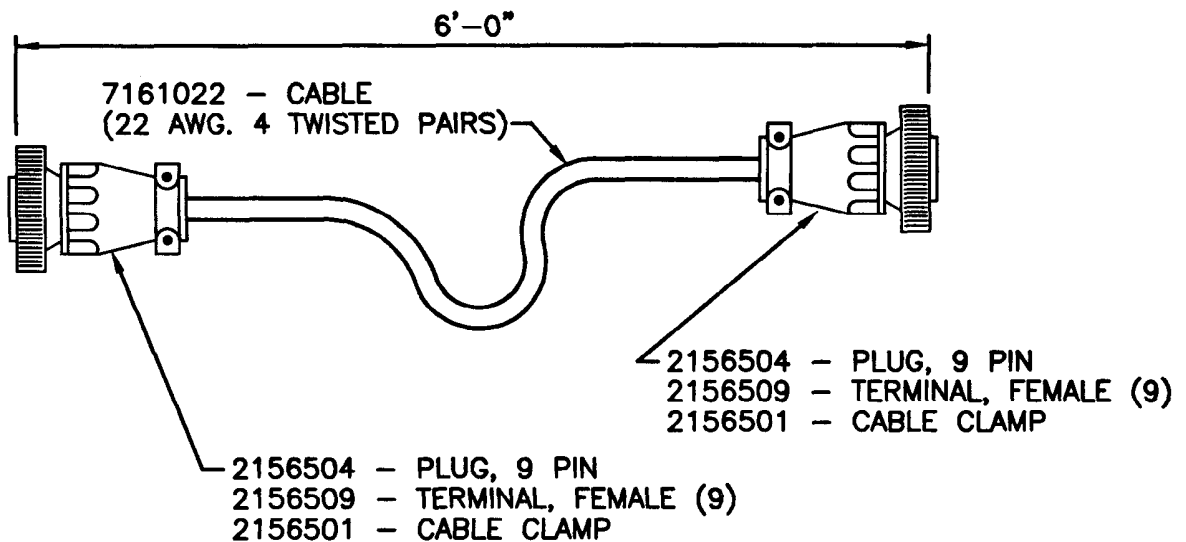
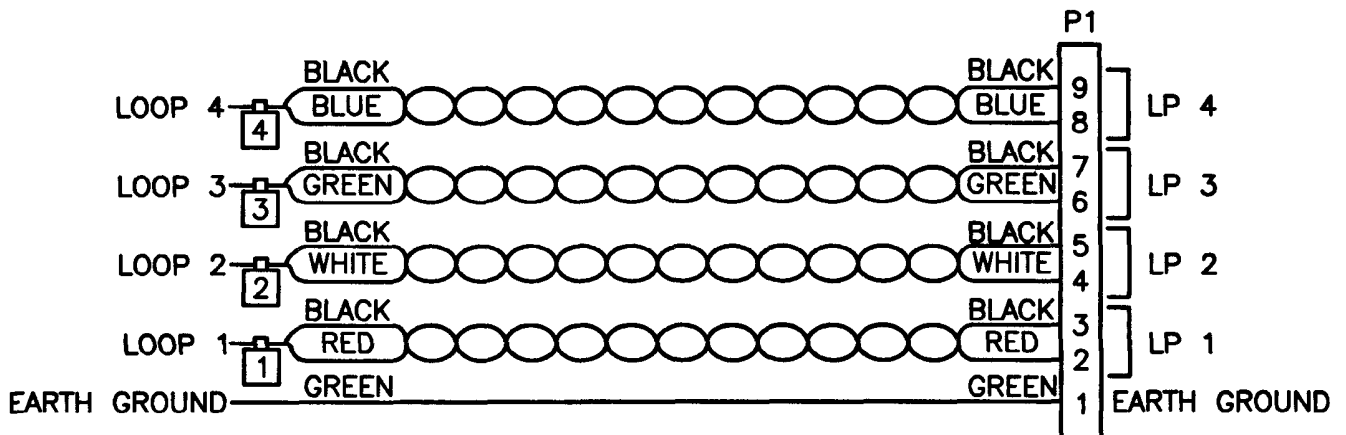
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NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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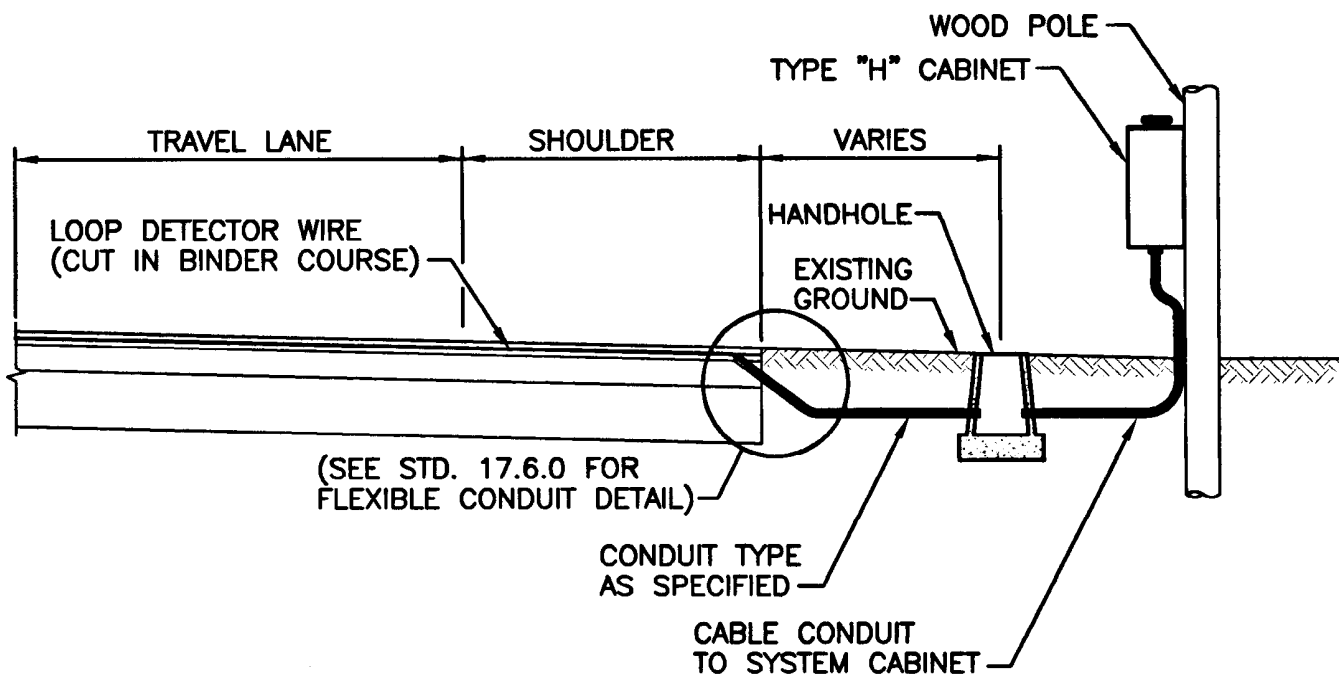
TRAFFIC MONITORING STATION PORTABLE COMPUTER CABLE

James A. Casabelli
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
17.2.0



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REVISIONS		
NO.	BY	DATE

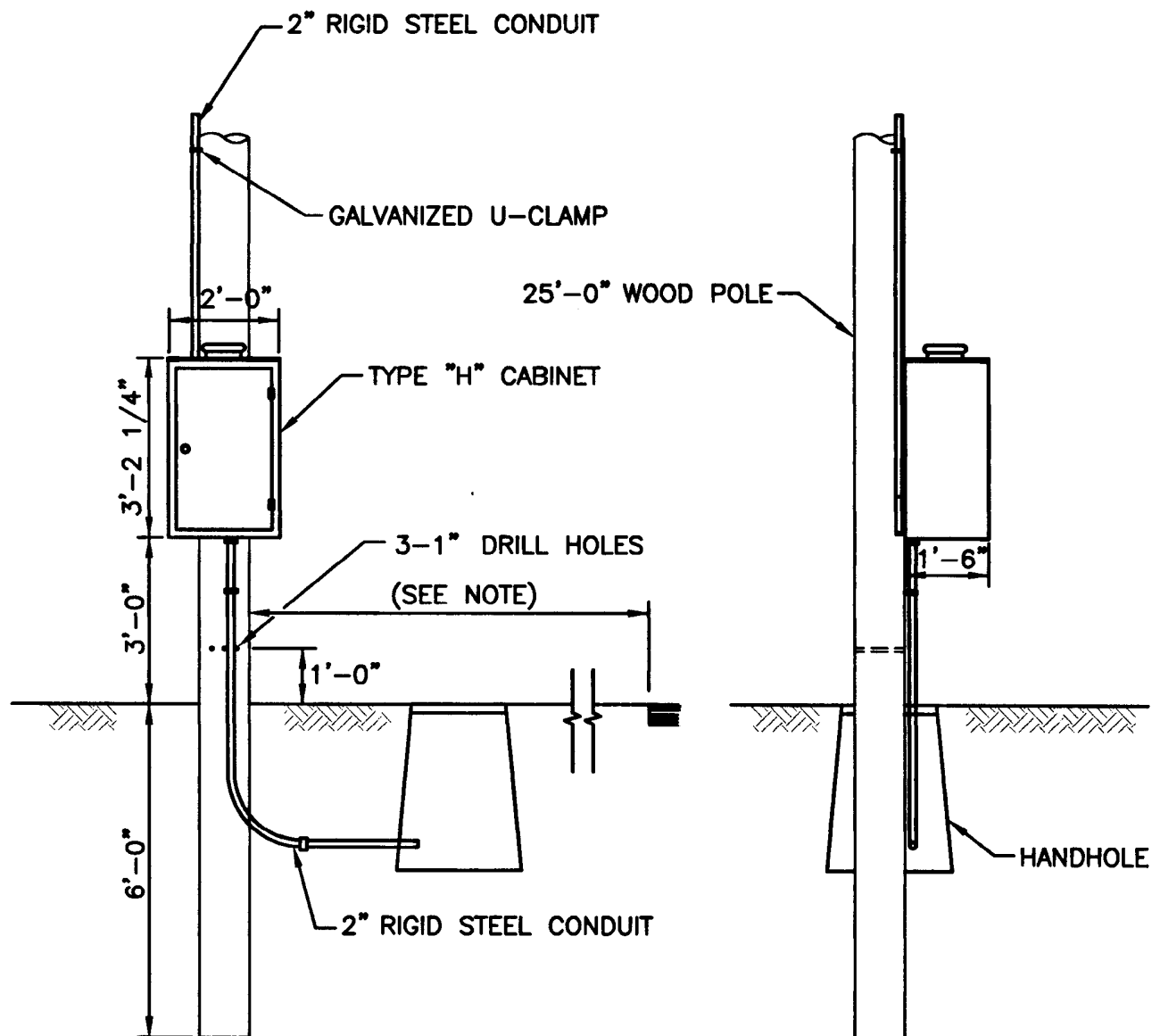
TRAFFIC MONITORING STATION POLE MOUNTED CABINET

James A. Casabelli
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





FRONT ELEVATION

SIDE ELEVATION

NOTE:

1. TYPE "H" CABINET MUST BE LOCATED A MIN. OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.
2. PROVIDE WEATHER HEAD AT TOP OF POLE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TRAFFIC MONITORING STATION TYPE "H" CABINET POST MOUNTED INSTALLATION		<div><div>R.I. STANDARD 17.3.1</div></div>
NO.	BY	DATE			
			<div><div><div>James A. Casabelli</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>		

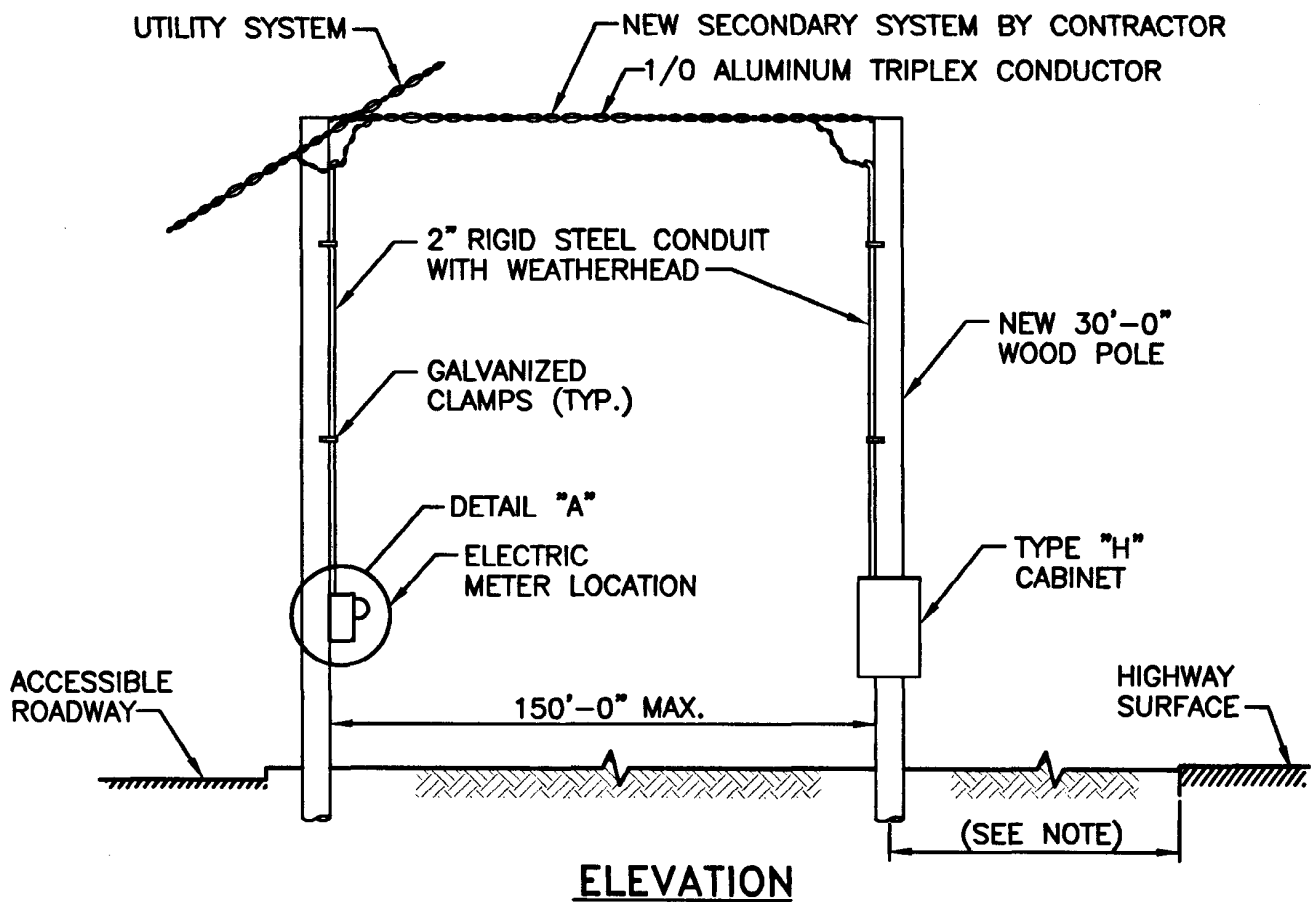
2" RIGID STEEL CONDUIT
FOR SECONDARY SERVICE

2" RIGID STEEL CONDUIT
FOR RIDOT SYSTEM

METER MAIN (100A.)
120/240 VOLT
(BY CONTRACTOR)

WOOD POLE
(EITHER BY UTILITY
OR CONTRACTOR)

DETAIL "A"



NOTE:

TYPE "H" CABINET MUST BE LOCATED A MINIMUM OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

NO.	BY	DATE

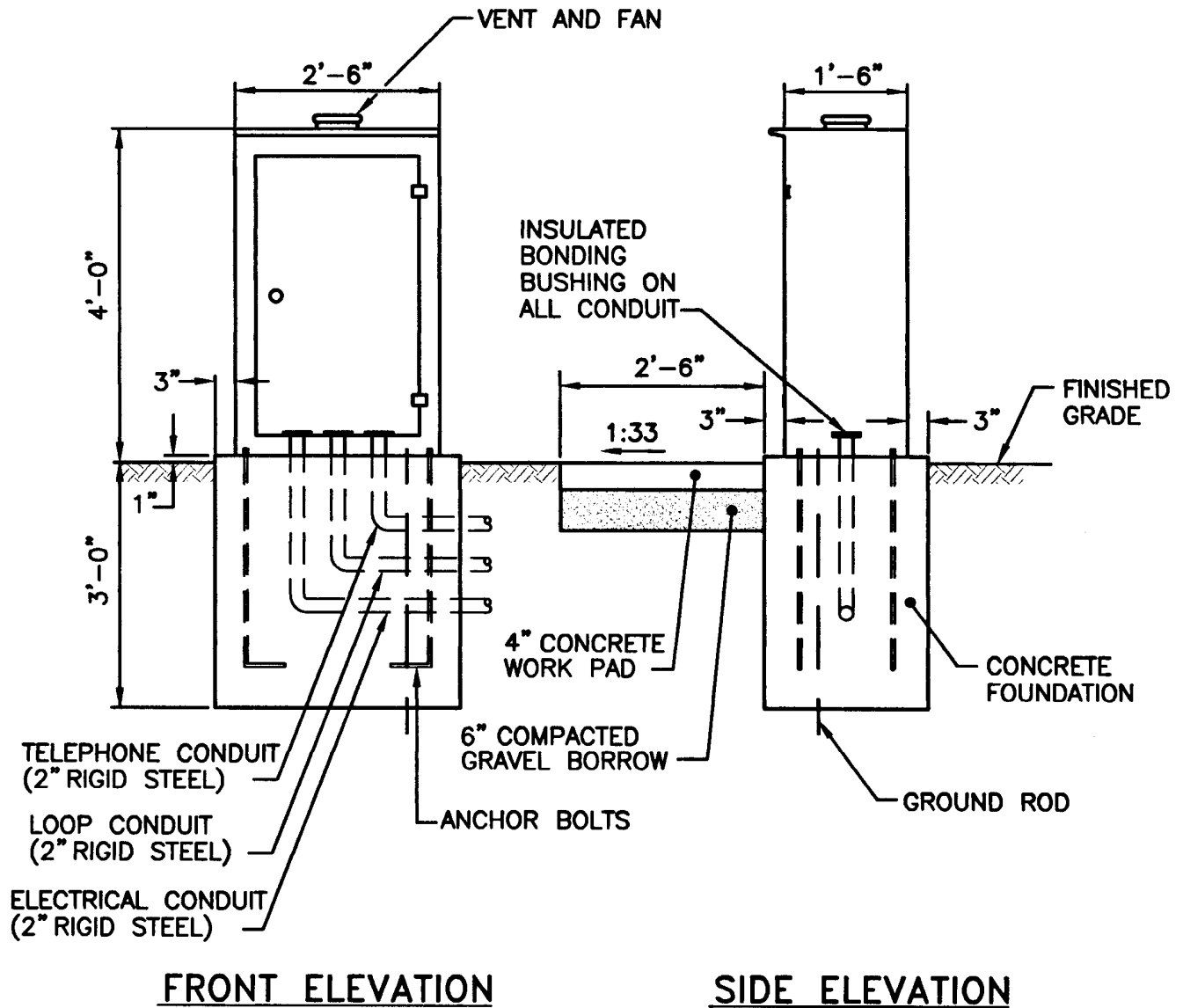
TRAFFIC MONITORING STATION TYPE "H" CABINET - ELECTRIC SERVICE

James H. Cypriotti
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
17.3.2



NOTE:

GASKET AND/OR CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHERTIGHT SEAL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

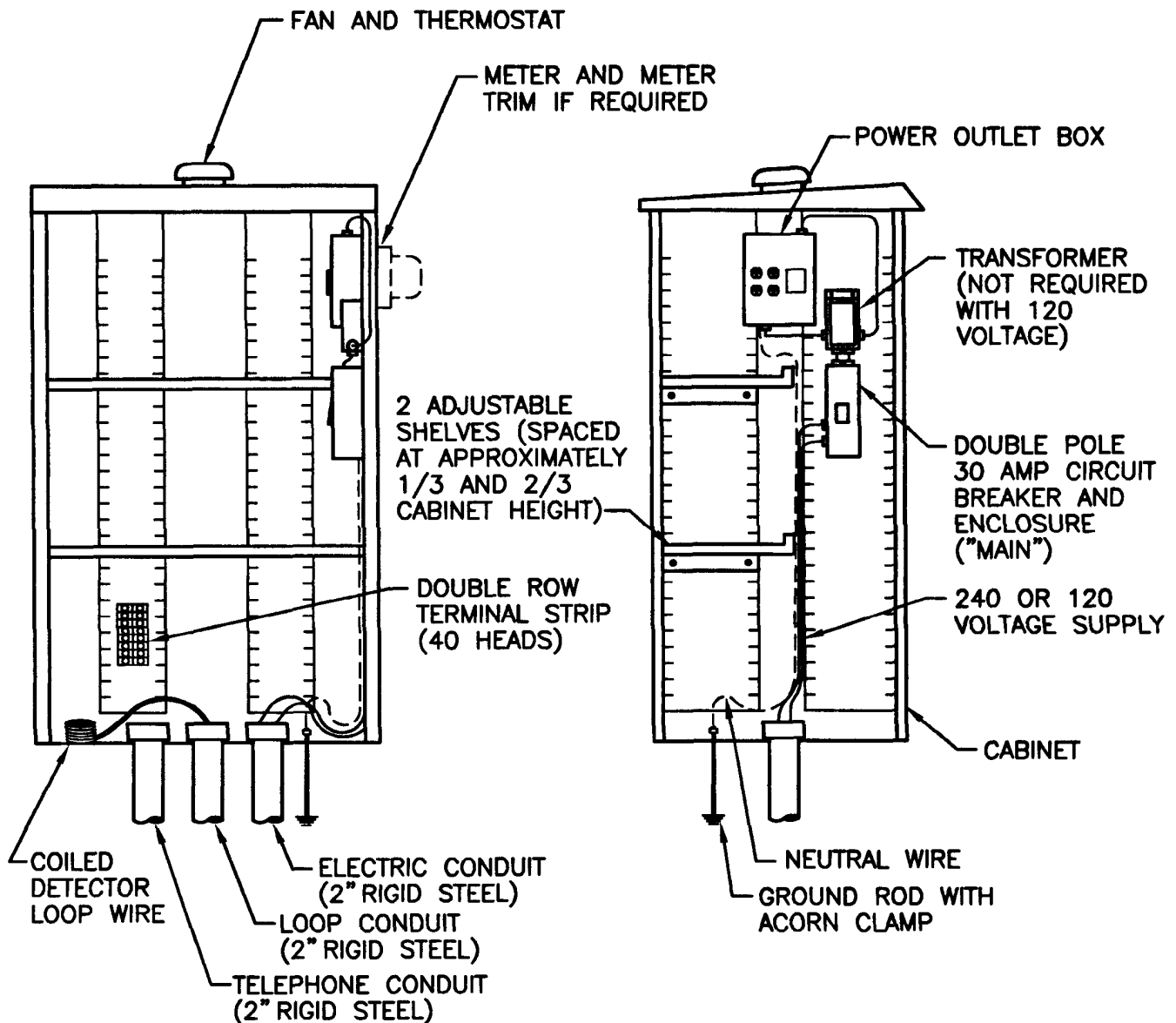
**TRAFFIC MONITORING STATION
CONTROLLER CABINET
GROUND MOUNTED INSTALLATION**

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





FRONT SECTION

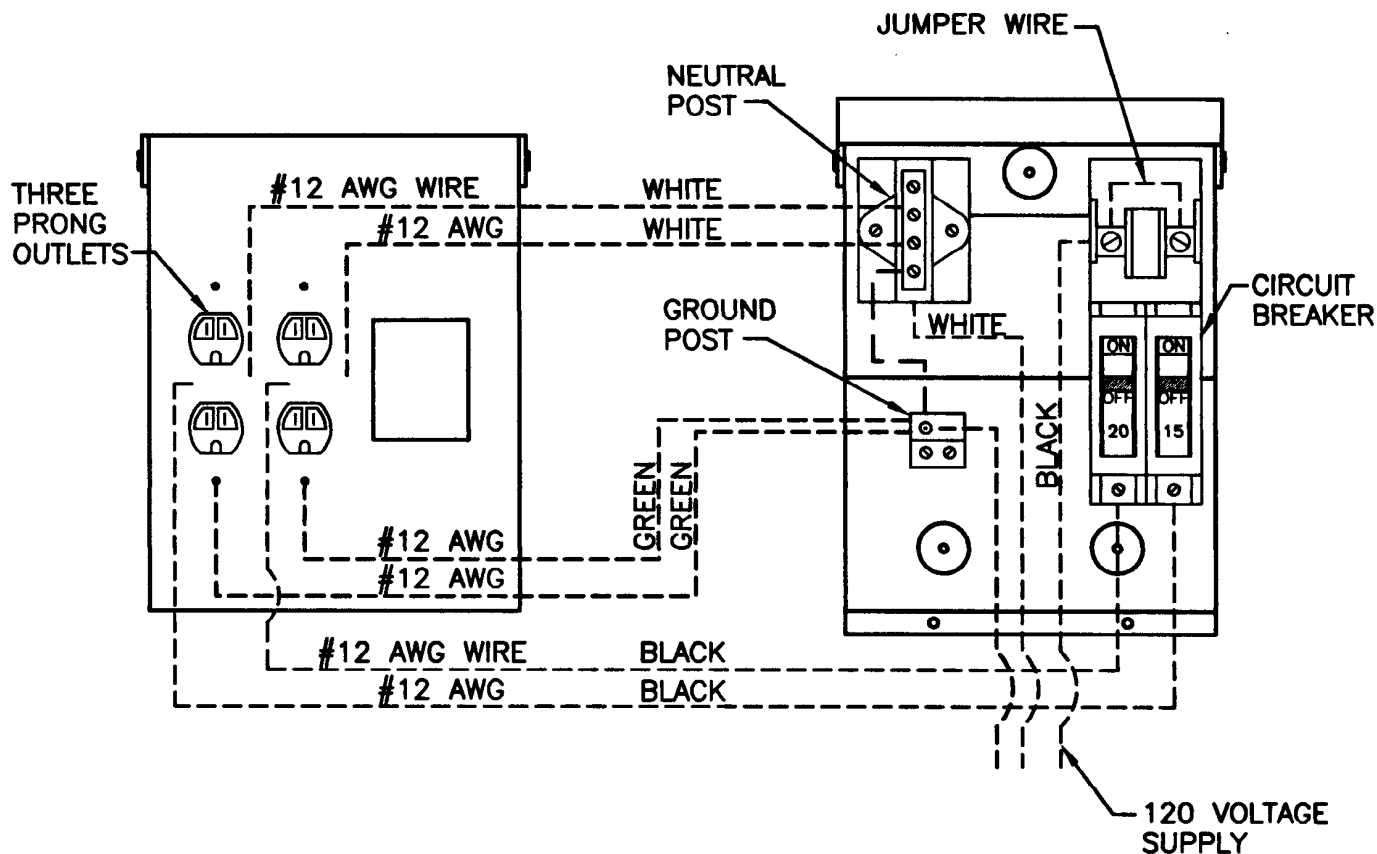
SIDE SECTION

NOTES:

1. TRANSFORMER MUST BE WIRED TO ALLOW 120 SECONDARY VOLTAGE AT POWER OUTLET BOX.
2. WIRING SHOWN WITHOUT METER. IF METER IS REQUIRED, WIRE METER BETWEEN CONDUIT AND "MAIN."
3. 3/4" MARINE PLYWOOD TO BE USED AS BACKING TO MOUNT ACCESSORIES.
4. DOUBLE POLE BREAKER SWITCH REQUIRED FOR 220 VOLTAGE ONLY. SINGLE POLE BREAKER WITH ENCLOSURE MAY BE USED FOR 110 VOLTAGE.
5. INSTALLATION TO INCLUDE TELEPHONE JACK, PULL CHAIN LIGHT AND SURGE ARRESTOR.
6. PROVIDE 60 AMP SERVICE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TRAFFIC MONITORING STATION CONTROLLER CABINET WIRING DETAILS - INTERIOR		<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 17.4.1 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> CHIEF DESIGN ENGINEER TRANSPORTATION </div> </div>		JUNE 15, 1998 ISSUE DATE



COVER AND OUTLETS

POWER OUTLET BOX

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

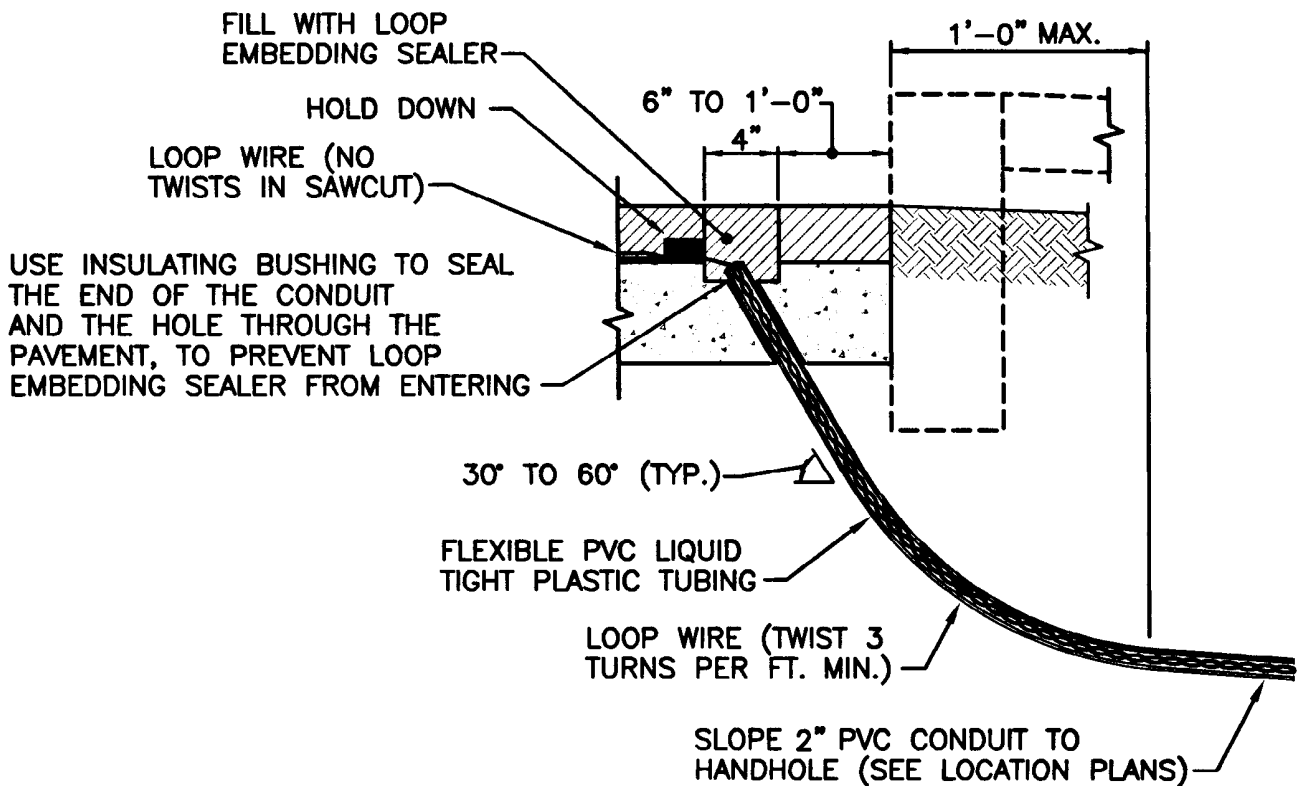
TRAFFIC MONITORING STATION
POWER OUTLET BOX

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. DO NOT USE SHARP OBJECTS TO HOLD DOWN WIRE.
2. CURB DETAIL IS SHOWN BY DASHED LINES, RUN THE CONDUIT UNDER THE CURB.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

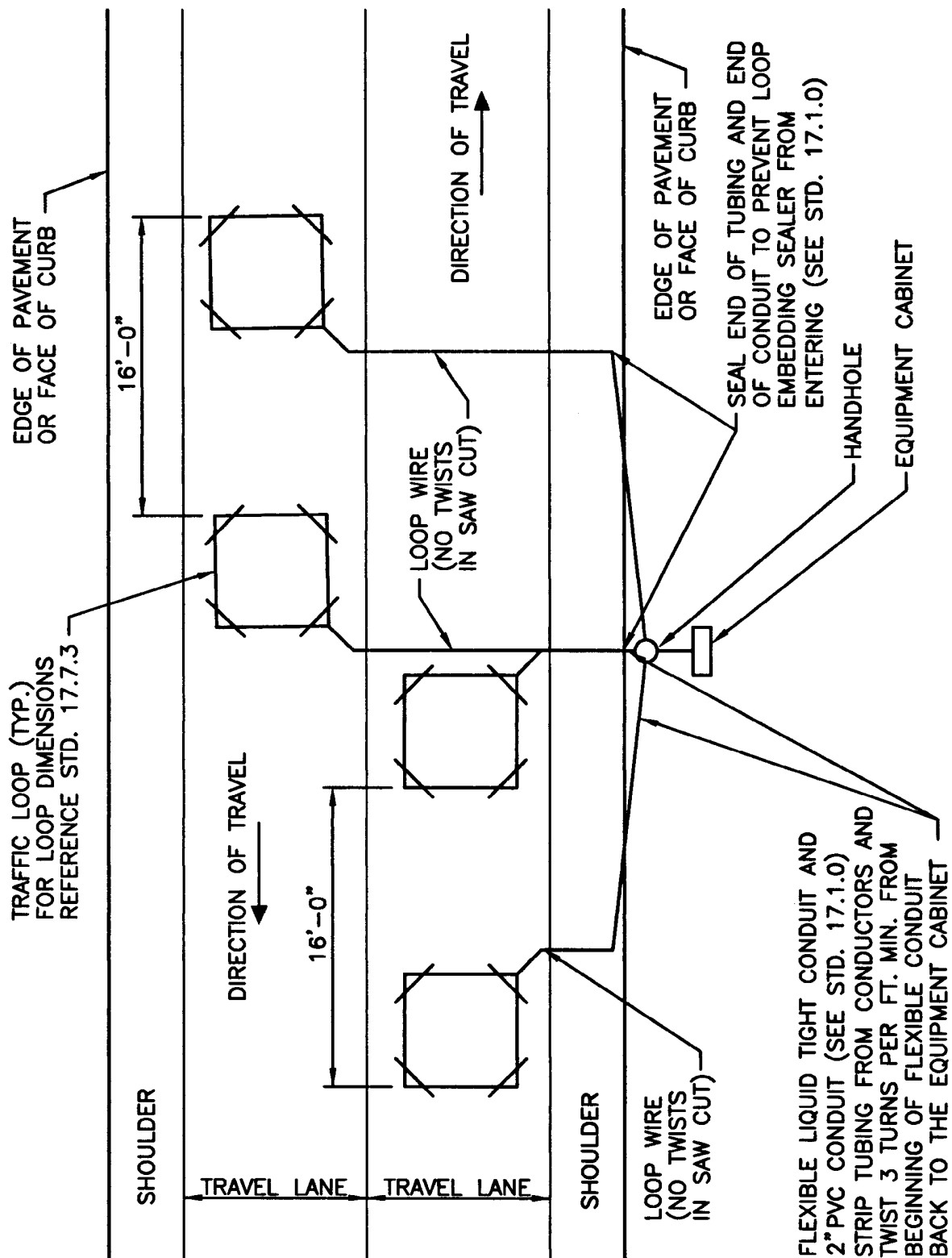
**TRAFFIC MONITORING STATION
FLEXIBLE CONDUIT INSTALLATION**

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
17.6.0



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

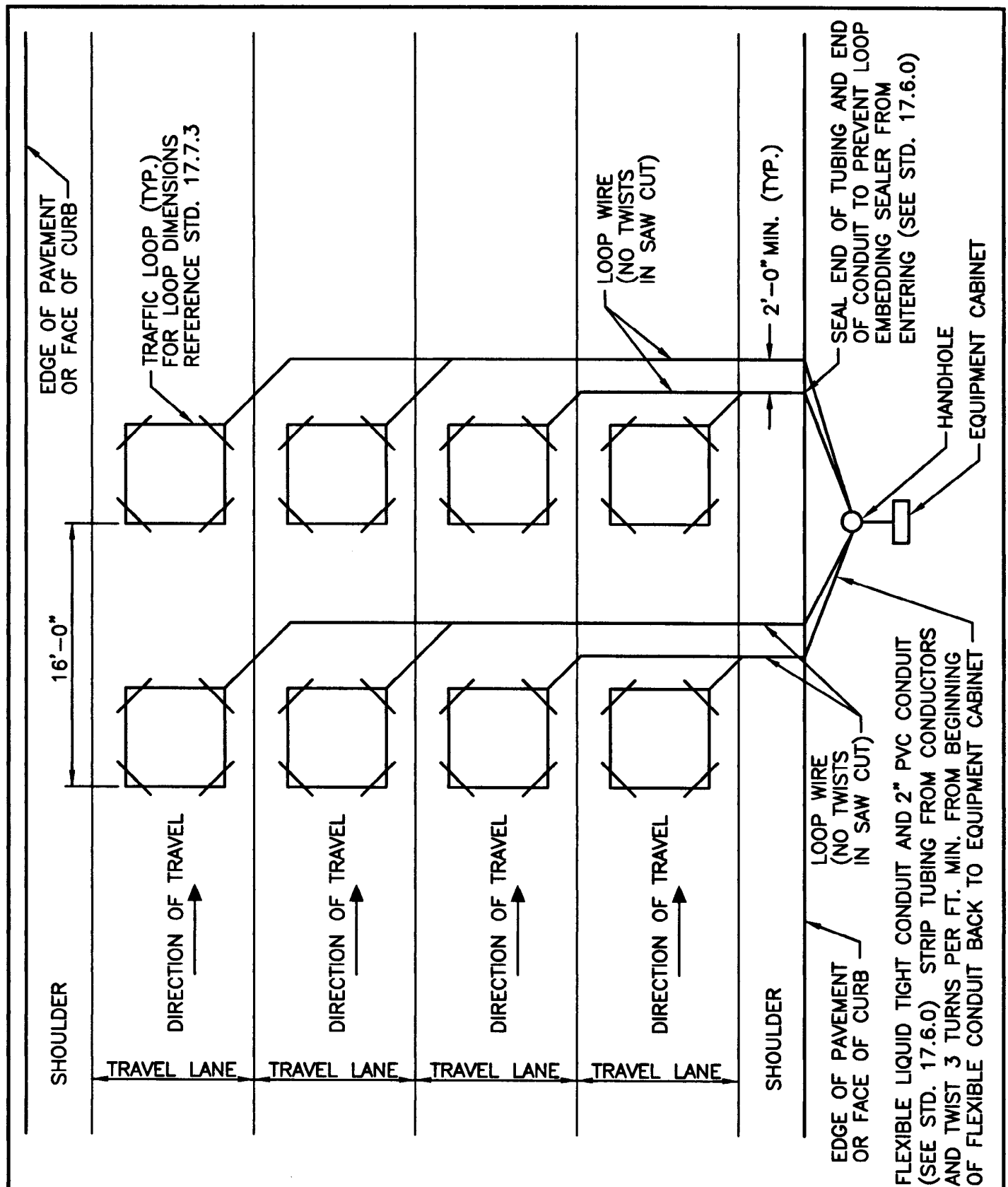
TRAFFIC MONITORING STATION LOOP WIRE LAYOUT FOR DIRECTIONAL COUNTING

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

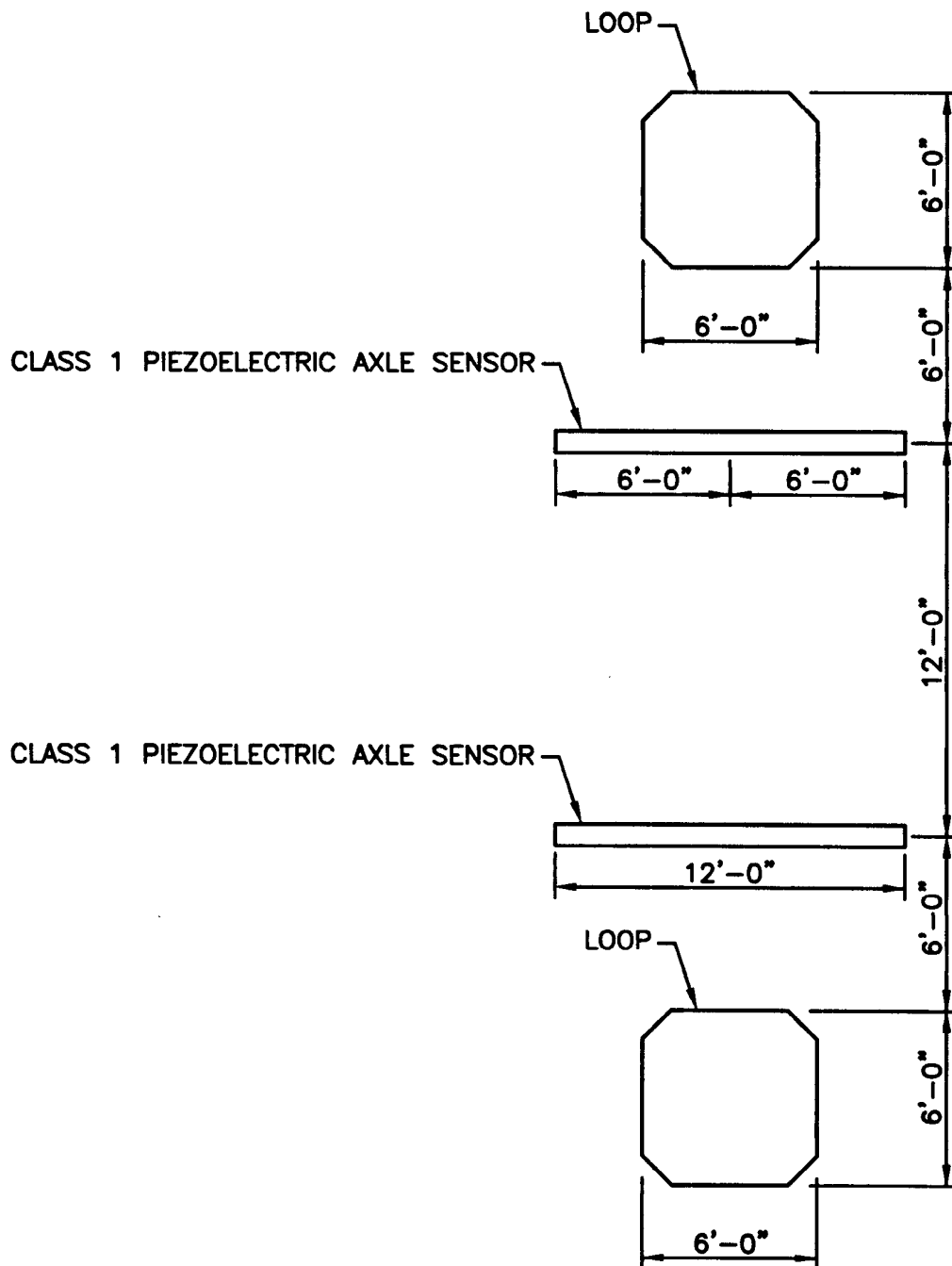
TRAFFIC MONITORING STATION LOOP WIRE LAYOUT FOR MULTIPLE LANES IN THE SAME DIRECTION

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

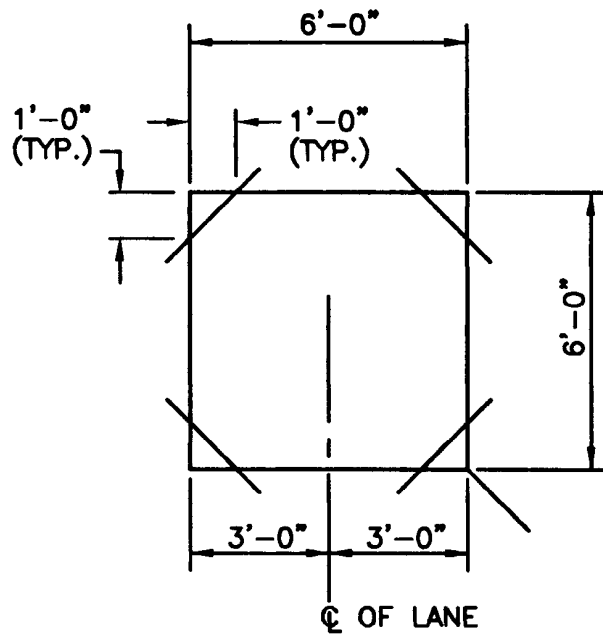
TRAFFIC MONITORING STATION AXLE SENSOR AND LOOP LAYOUT

James H. Casella
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

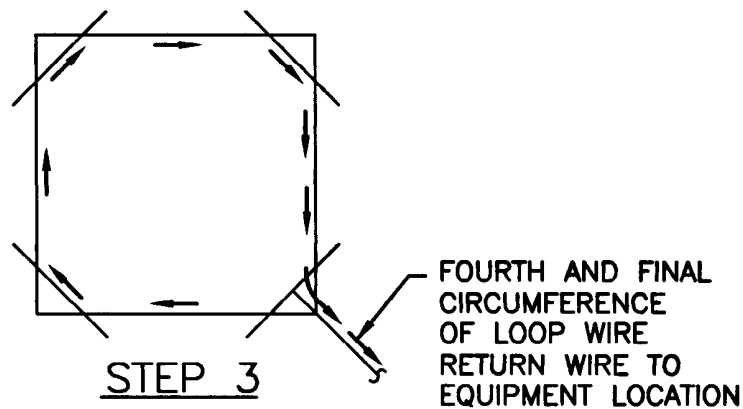
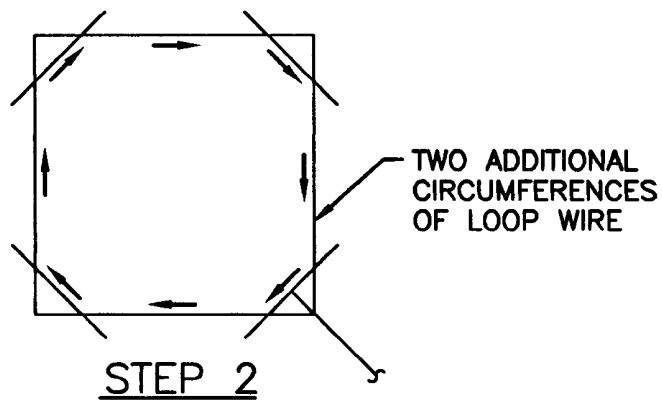
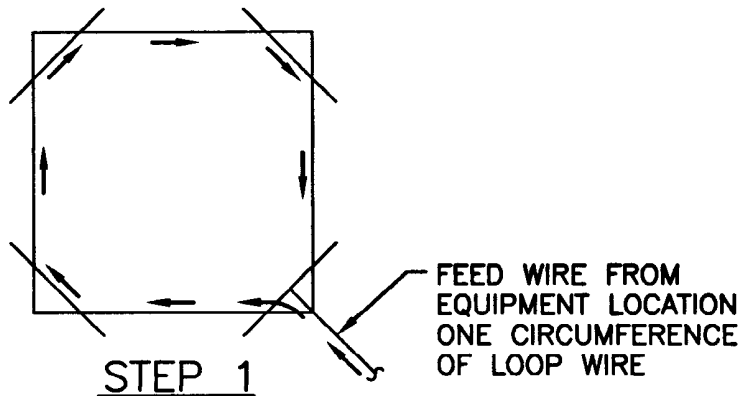
TRAFFIC MONITORING STATION LOOP DIMENSIONS

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

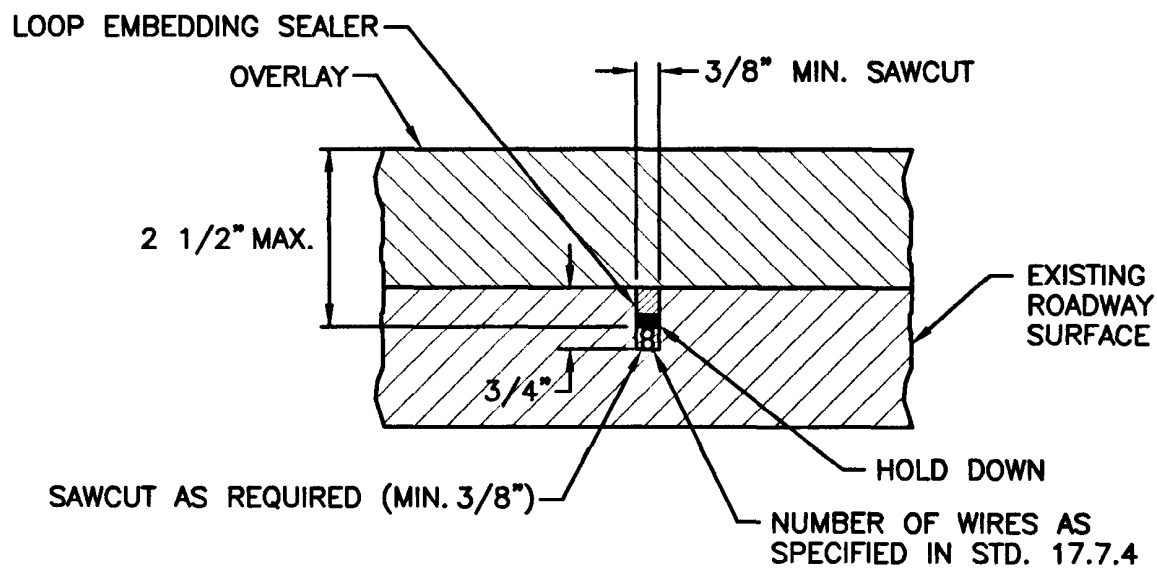
TRAFFIC MONITORING STATION LOOP WIRE INSTALLATION

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



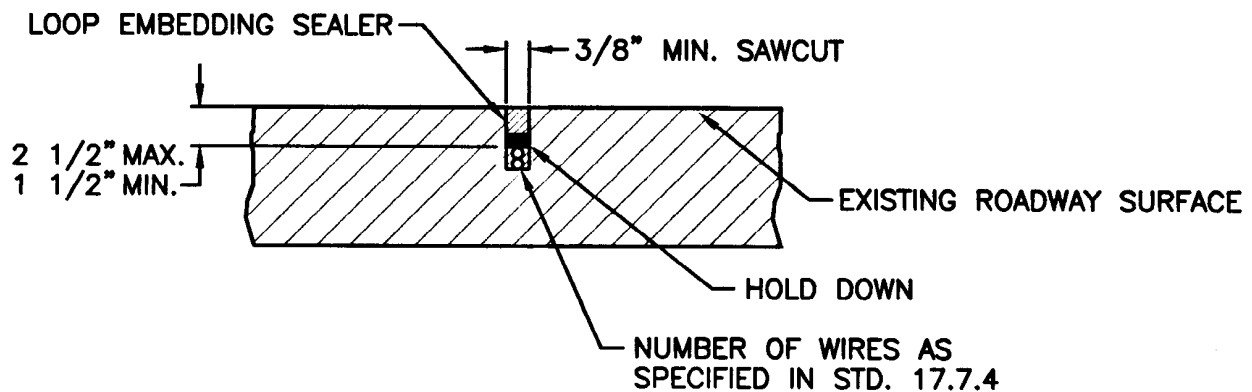


NOTE:

USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION



REVISIONS			TRAFFIC MONITORING STATION SAWCUT CROSS-SECTION WITH A PAVEMENT OVERLAY		<div style="border: 2px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> R.I. STANDARD 17.7.5 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> JUNE 15, 1998 <small>ISSUE DATE</small> </div> </div>		

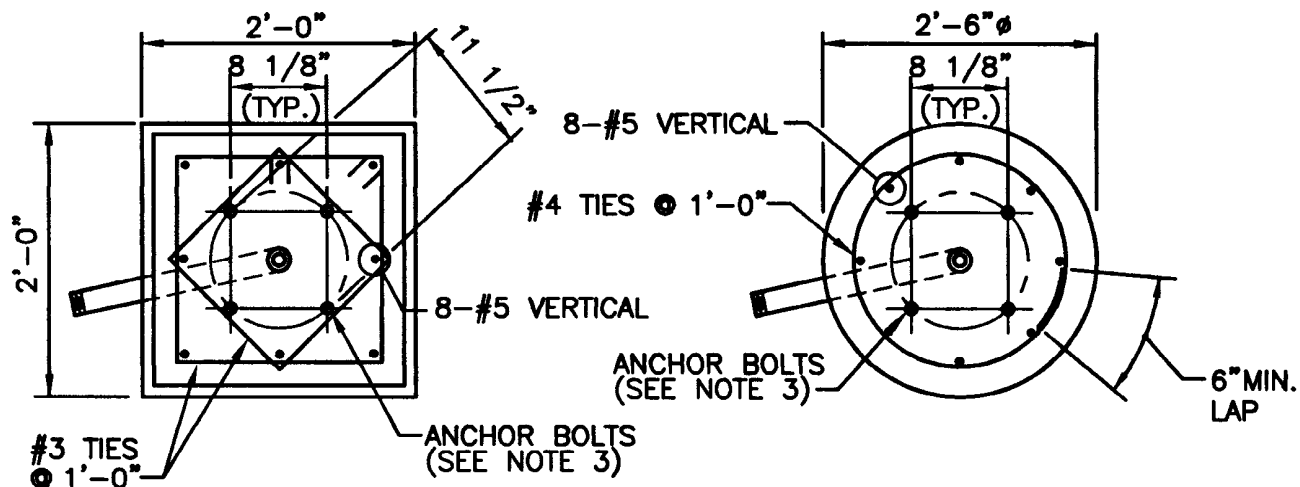


NOTE:

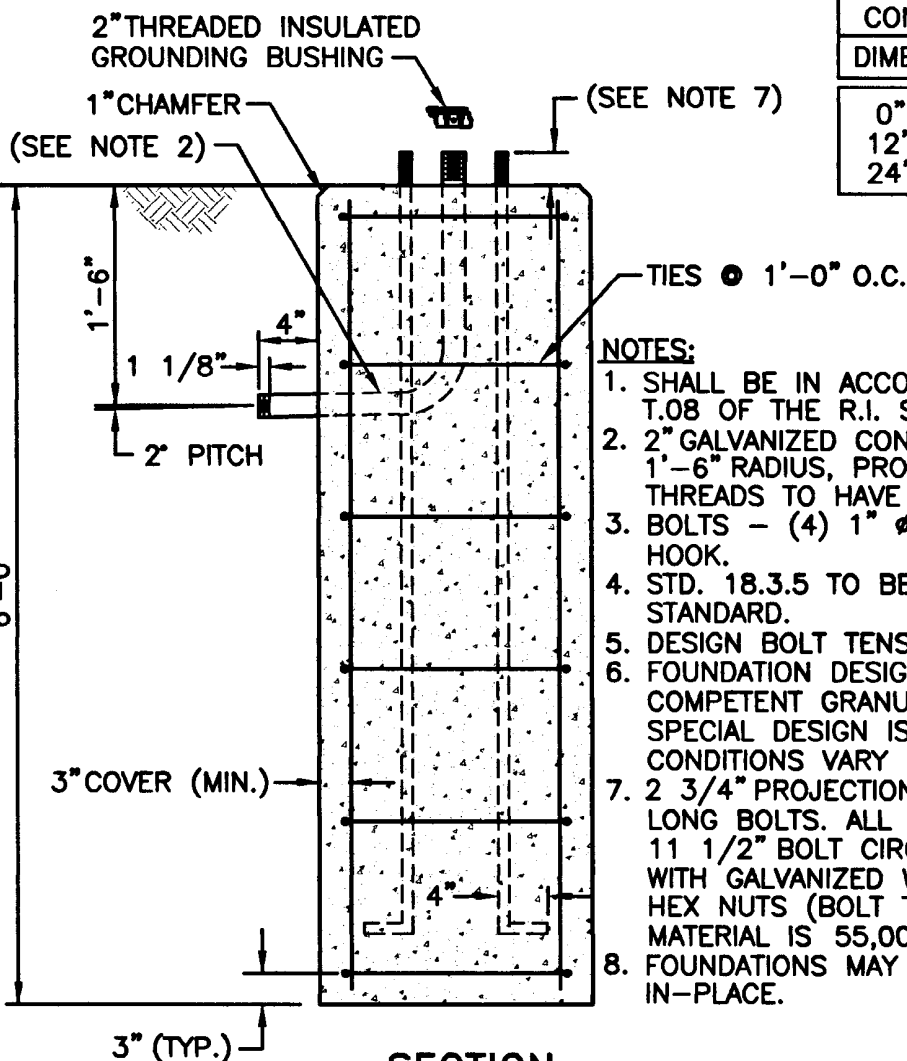
USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TRAFFIC MONITORING STATION SAWCUT CROSS-SECTION WITHOUT A PAVEMENT OVERLAY		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 17.7.6 </div>
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE



CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2" GALVANIZED CONDUIT WITH 92° BEND AND 1'-6" RADIUS, PROJECTING 2 3/4" AS SHOWN. THREADS TO HAVE PROTECTOR.
3. BOLTS - (4) 1" Ø x 5'-6" LONG WITH 4" HOOK.
4. STD. 18.3.5 TO BE USED WITH THIS STANDARD.
5. DESIGN BOLT TENSION = 30 K.
6. FOUNDATION DESIGN IS BASED ON COMPETENT GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.
7. 2 3/4" PROJECTION OF (4) 1" Ø x 5'-6" LONG BOLTS. ALL GALVANIZED BOLTS ON A 11 1/2" BOLT CIRCLE SHALL BE SHIPPED WITH GALVANIZED WASHERS AND GALVANIZED HEX NUTS (BOLT THREAD IS 8NC). BOLT MATERIAL IS 55,000 PSI MIN. YIELD.
8. FOUNDATIONS MAY BE PRECAST OR CAST IN-PLACE.

SECTION

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE LIGHT STANDARD BASE

REVISIONS

NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

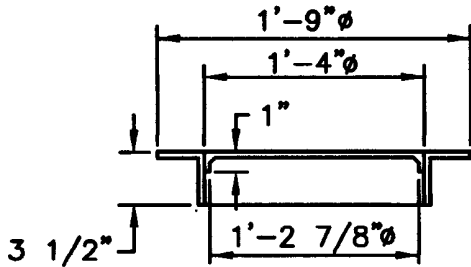
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
18.1.0

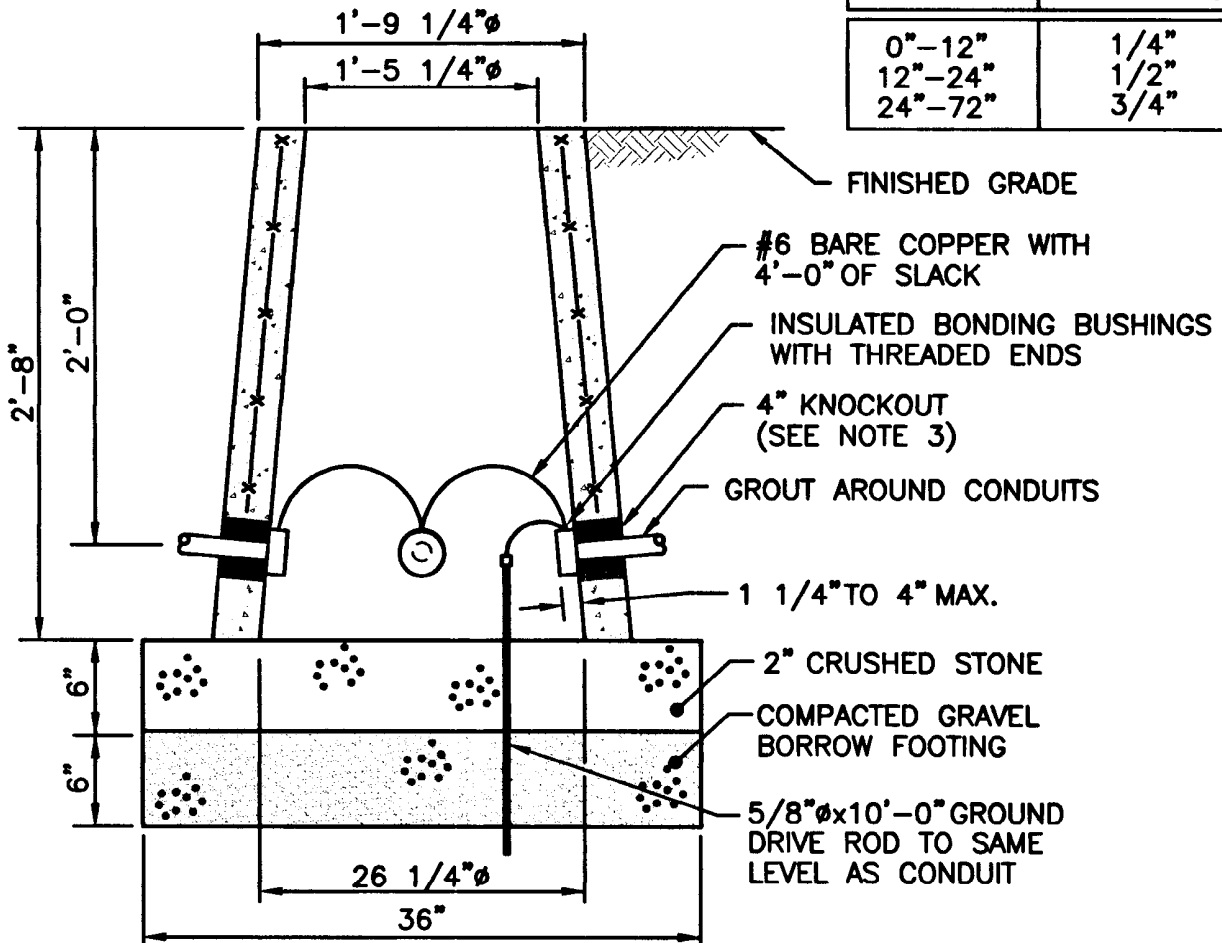
NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE R.I. STANDARD SPECIFICATIONS.
2. COVER TO HAVE DIAMOND SURFACE AND THE WORD "ELECTRIC" FOR ELECTRIC HANDHOLES, "SIGNAL" FOR SIGNAL HANDHOLES AND "COMM." FOR TELEPHONE HANDHOLES.
3. 4" KNOCKOUTS ARE TO BE PROVIDED ON ALL FOUR SIDES OF THE HANDHOLE. FOLLOWING CONDUIT INSTALLATION THE CONTRACTOR SHALL SEAL AROUND CONDUIT ENTRANCES WITH CEMENT.
4. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.058 SQ. IN./LIN. FT. (EACH WAY).



**SECTION
HANDHOLE RING AND COVER**

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"



**SECTION
HANDHOLE TYPE "A"**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

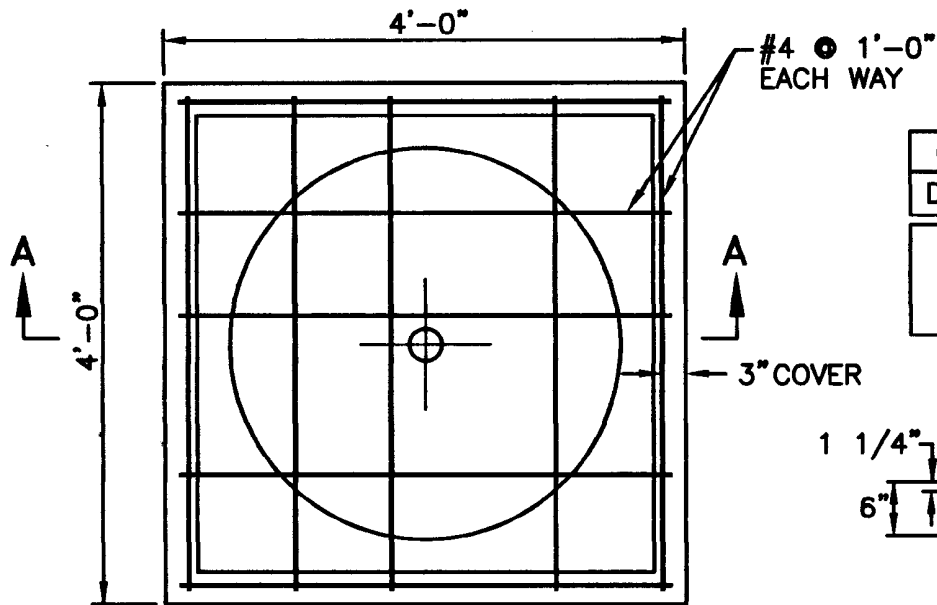
PRECAST TYPE "A" HANDHOLE

Jean H. Gaudin
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

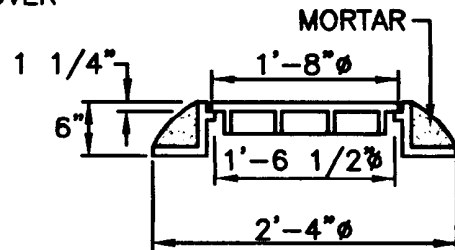
JUNE 15, 1998
ISSUE DATE



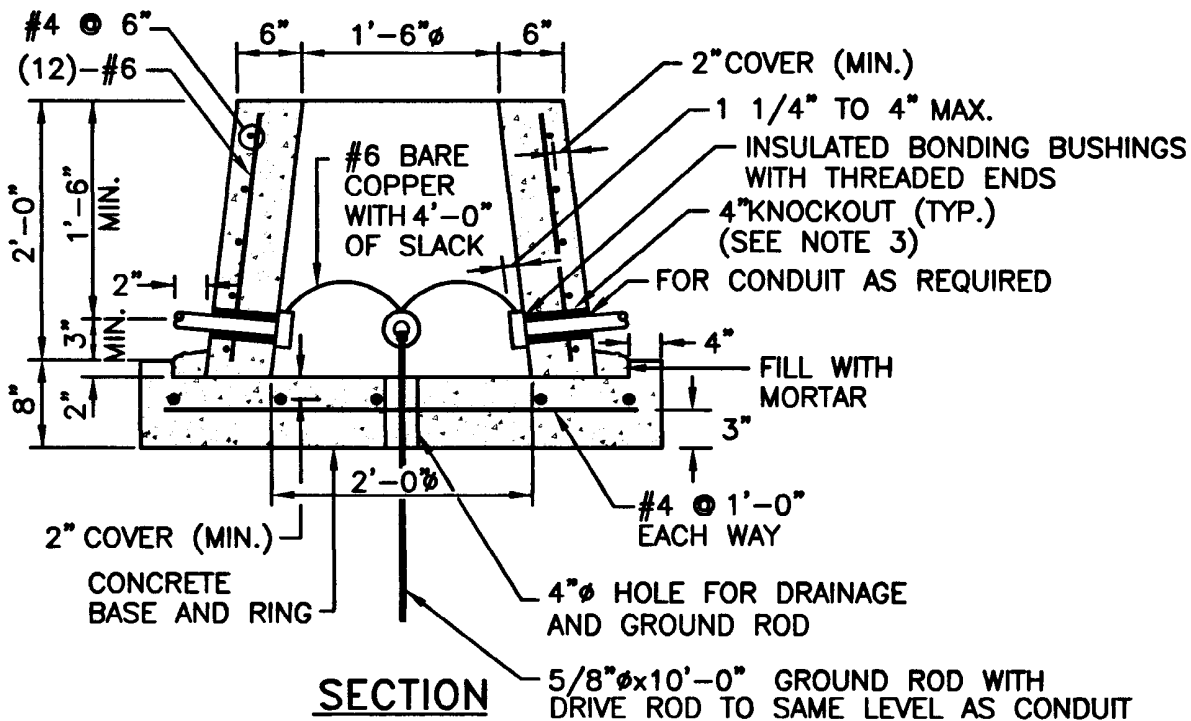


PLAN

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"



FRAME AND COVER



SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE R.I. STANDARD SPECIFICATIONS.
2. COVER TO HAVE DIAMOND SURFACE AND THE WORD "ELECTRIC" ON ELECTRIC HANDHOLES, "SIGNAL" ON SIGNAL HANDHOLES, AND "COMM." ON TELEPHONE HANDHOLES.
3. 4" KNOCKOUTS ARE TO BE PROVIDED ON ALL FOUR SIDES OF THE HANDHOLE. FOLLOWING CONDUIT INSTALLATION THE CONTRACTOR SHALL SEAL AROUND THE CONDUIT ENTRANCES WITH CEMENT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

HEAVY-DUTY PRECAST HANDHOLE

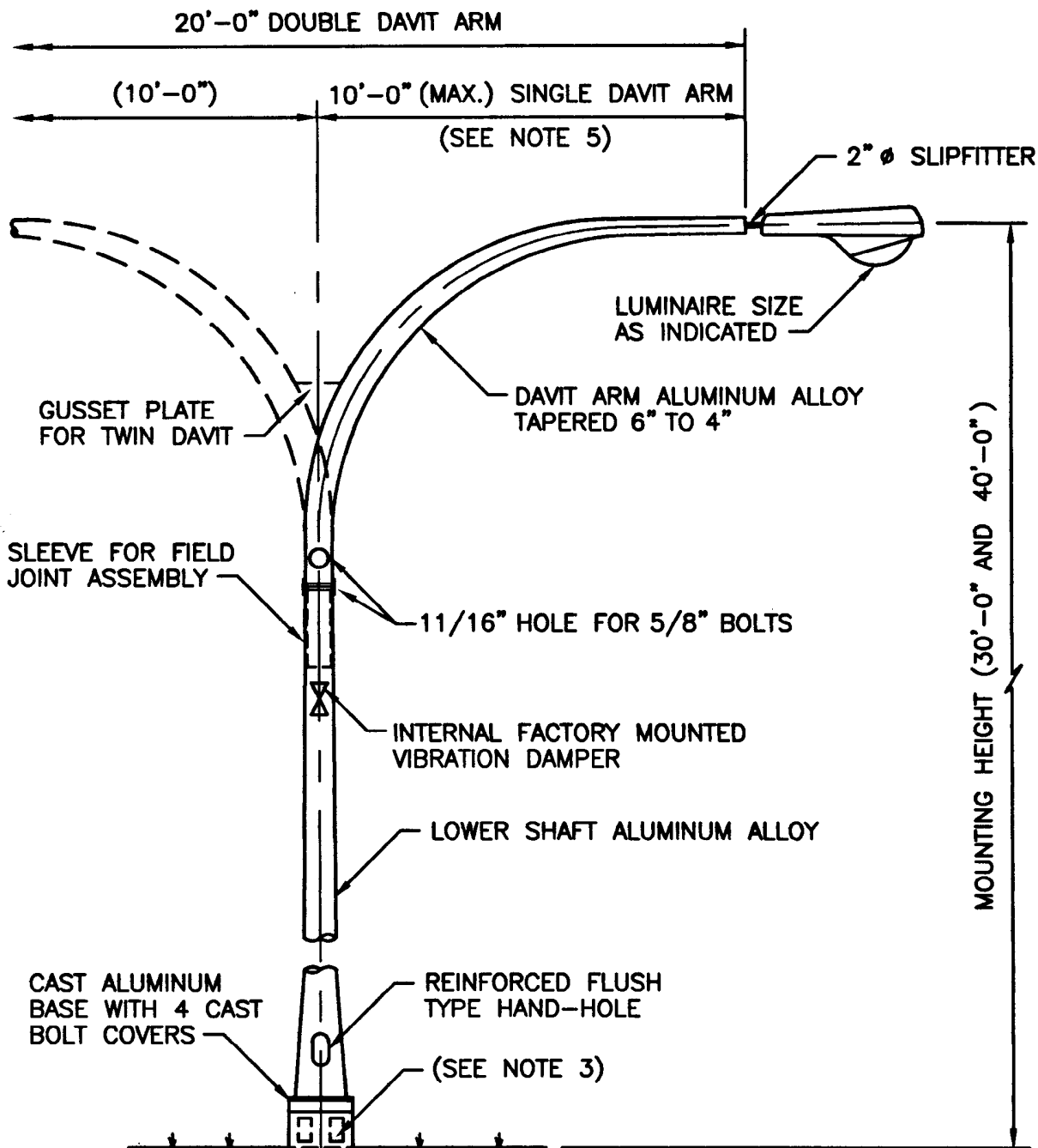
REVISIONS		
NO.	BY	DATE

James H. Casella
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





(SEE NOTE 4)

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE CONTRACT DOCUMENTS FOR SPECIFIC POLE HEIGHTS AND DAVIT CONFIGURATIONS.
3. FOR BREAKAWAY COUPLING DETAIL, SEE STD. 18.3.4.
4. FOR FOUNDATION DETAILS, SEE STD. 18.1.0 AND 40.4.0.
5. SMALLER ARMS (4'-0" AND 6'-0") ALLOWED FOR RAMPS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

NO.	BY	DATE

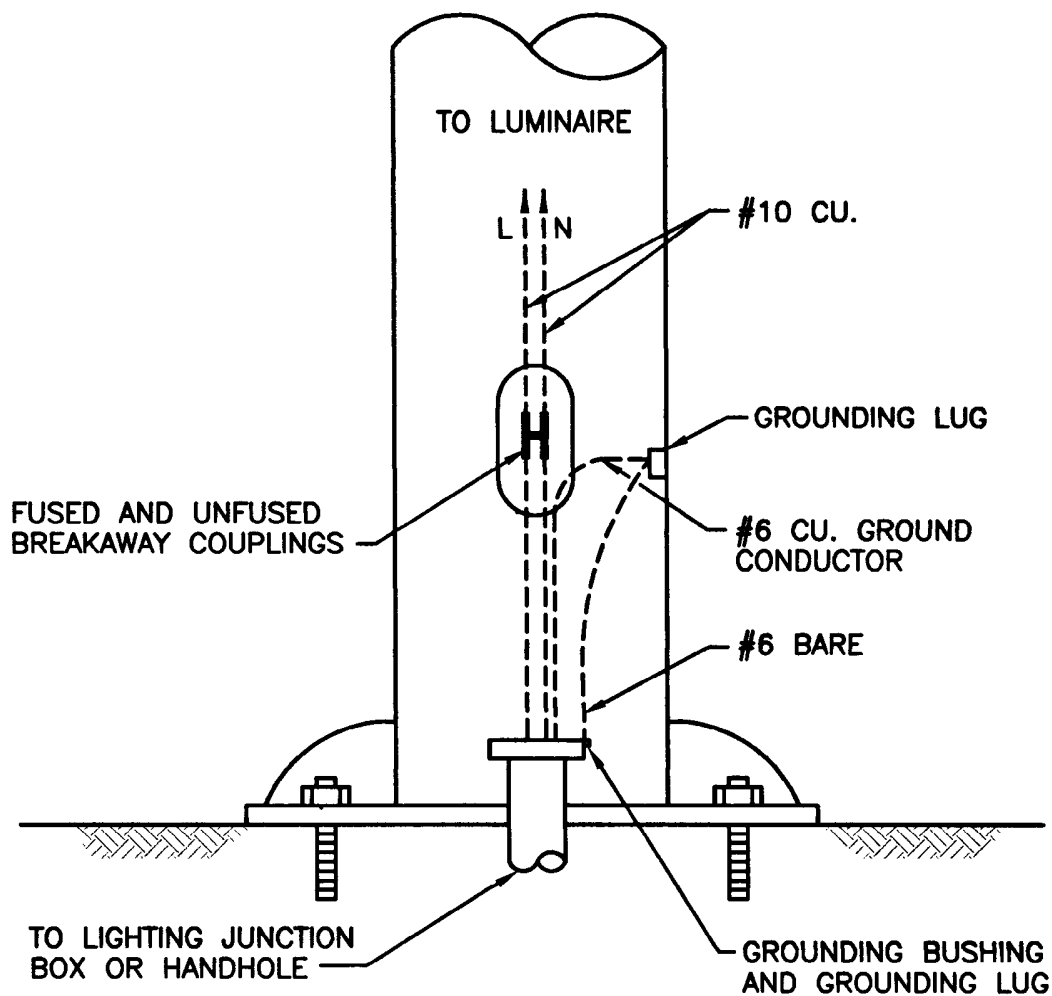
ALUMINUM LIGHTING STANDARDS

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
18.3.0



NOTE:

SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

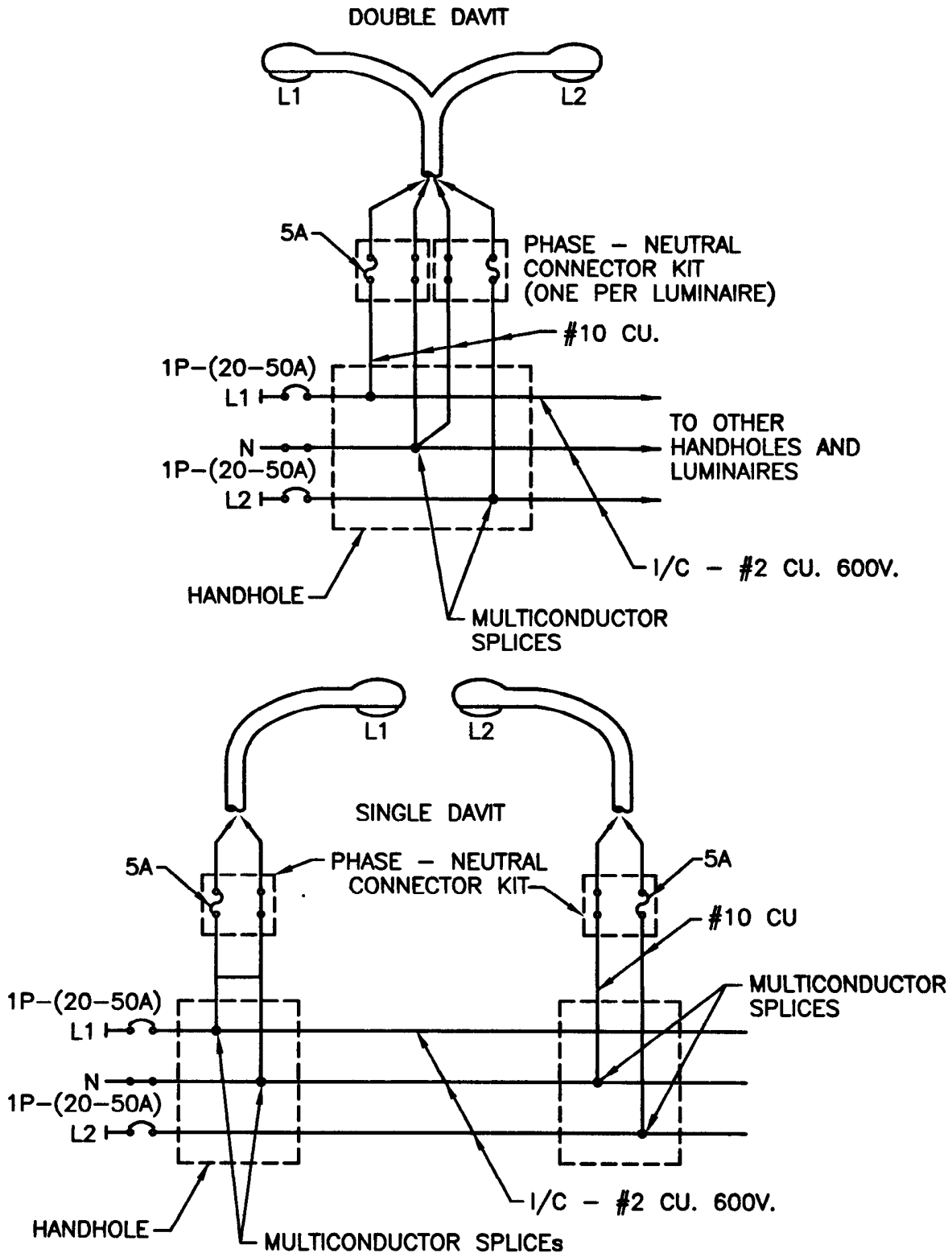
ALUMINUM POLE – GROUNDING DETAIL

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

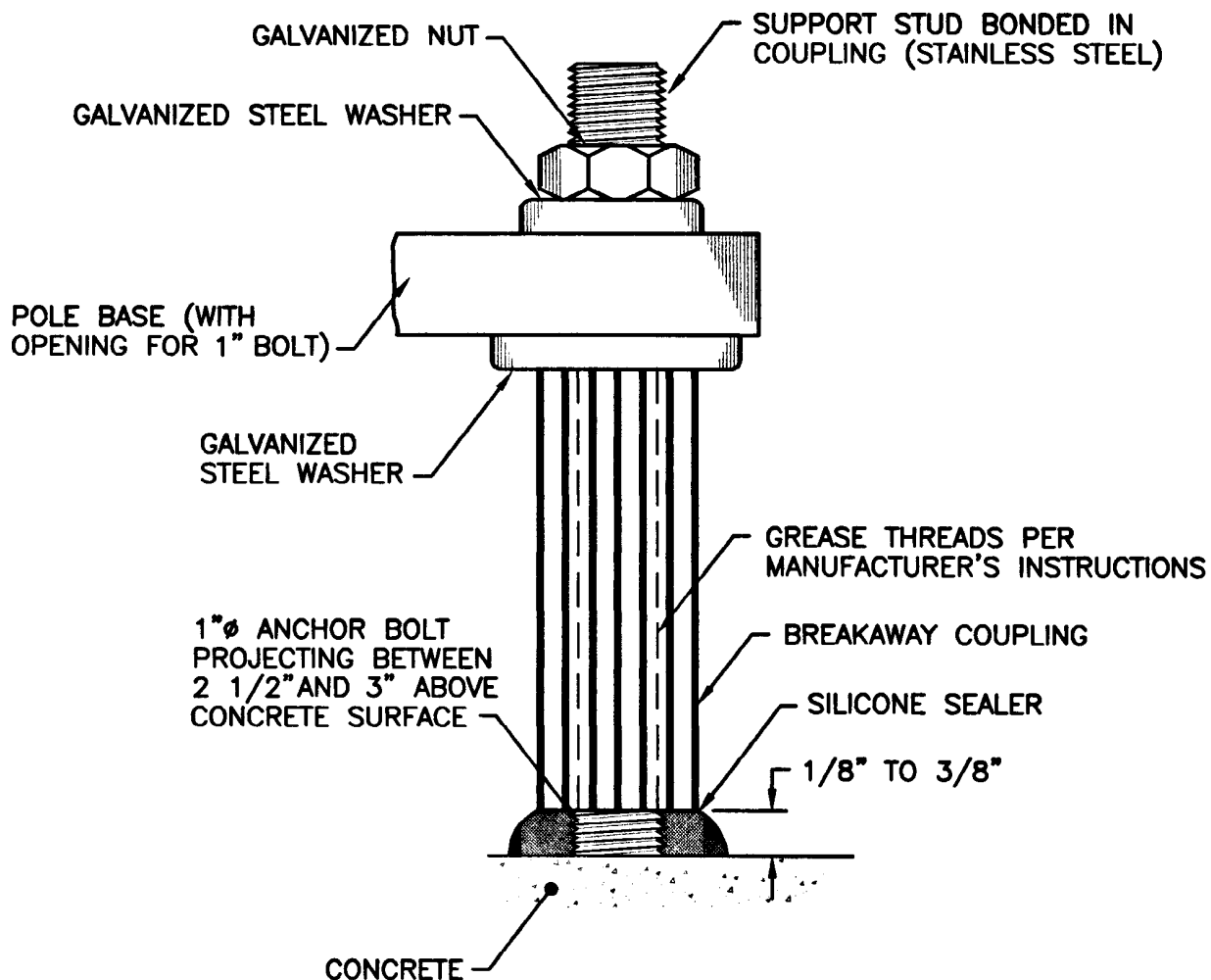
TYPICAL LUMINAIRE - WIRING DIAGRAM

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





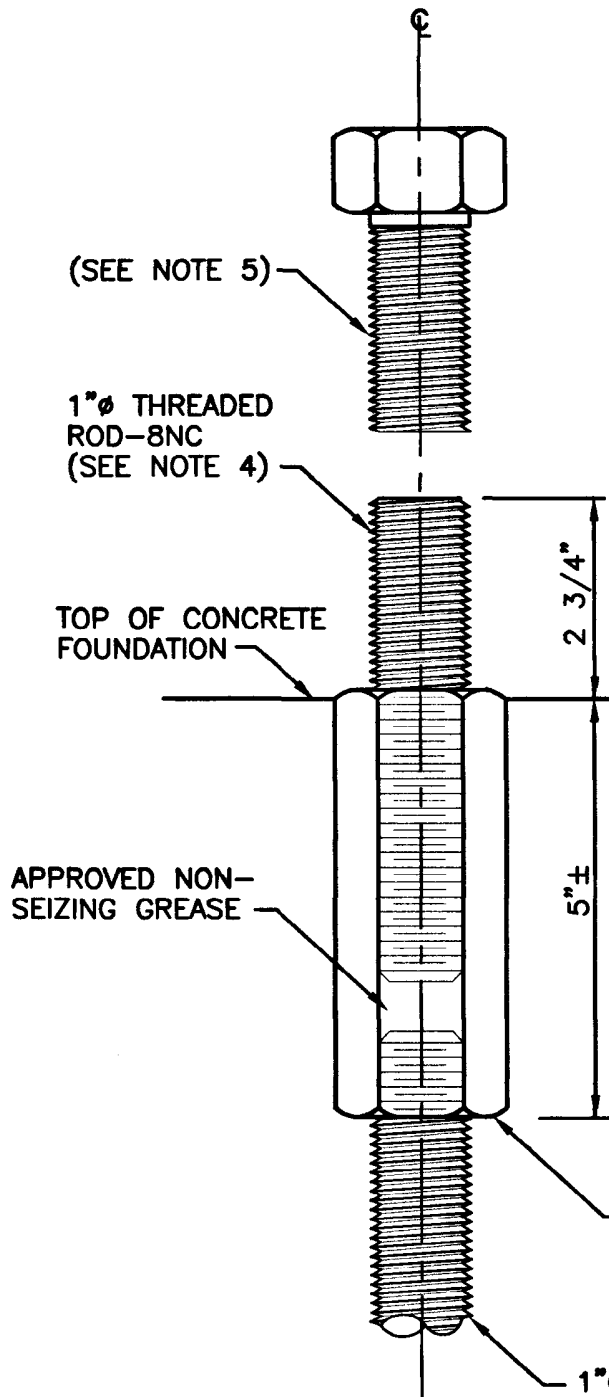


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 18.3.5 TO BE USED WITH THIS STANDARD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BREAKAWAY SUPPORT COUPLINGS FOR LIGHT STANDARDS	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 18.3.4 </div>
NO.	BY	DATE		
			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">  CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>	



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD SHALL BE COORDINATED WITH STD. 18.1.0 AND 18.3.4.
3. THE HEXAGONAL COUPLINGS SHALL BE GALVANIZED AND SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1" ϕ ANCHOR BOLTS. THE BOLT LENGTH SHALL BE DETERMINED BY THE BOLT SUPPLIER AND SHALL MEET THE APPROVAL OF THE ENGINEER.
4. THE 1" ϕ STAINLESS STEEL THREADED RODS SHALL BE USED WHEN STD. 18.3.4 BREAKAWAY COUPLINGS ARE SPECIFIED. THEY SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1" ϕ ANCHOR BOLTS. THEY SHALL BE BONDED TO THE STD. 18.3.4 COUPLINGS WITH A BONDING MATERIAL APPROVED BY THE BREAKAWAY COUPLING MANUFACTURER.
5. WHEN STD. 18.3.4 COUPLINGS ARE NOT SPECIFIED, GALVANIZED OR STAINLESS STEEL HEX BOLTS SHALL BE USED INSTEAD OF THREADED RODS. THEY SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1" ϕ ANCHOR BOLTS.
6. APPROVED PLUGS SHALL BE INSERTED INTO THE HEX COUPLINGS DURING CONSTRUCTION OF THE FOUNDATION.

1" ϕ GALVANIZED HEX COUPLING
(SEE NOTE 3)

1" ϕ GALVANIZED ANCHOR BOLTS, 5'-6" LONG,
55,000 PSI. MINIMUM YIELD, 8NC BOLT THREADS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**RECESSED BOLT COUPLINGS
FOR LIGHT STANDARDS**

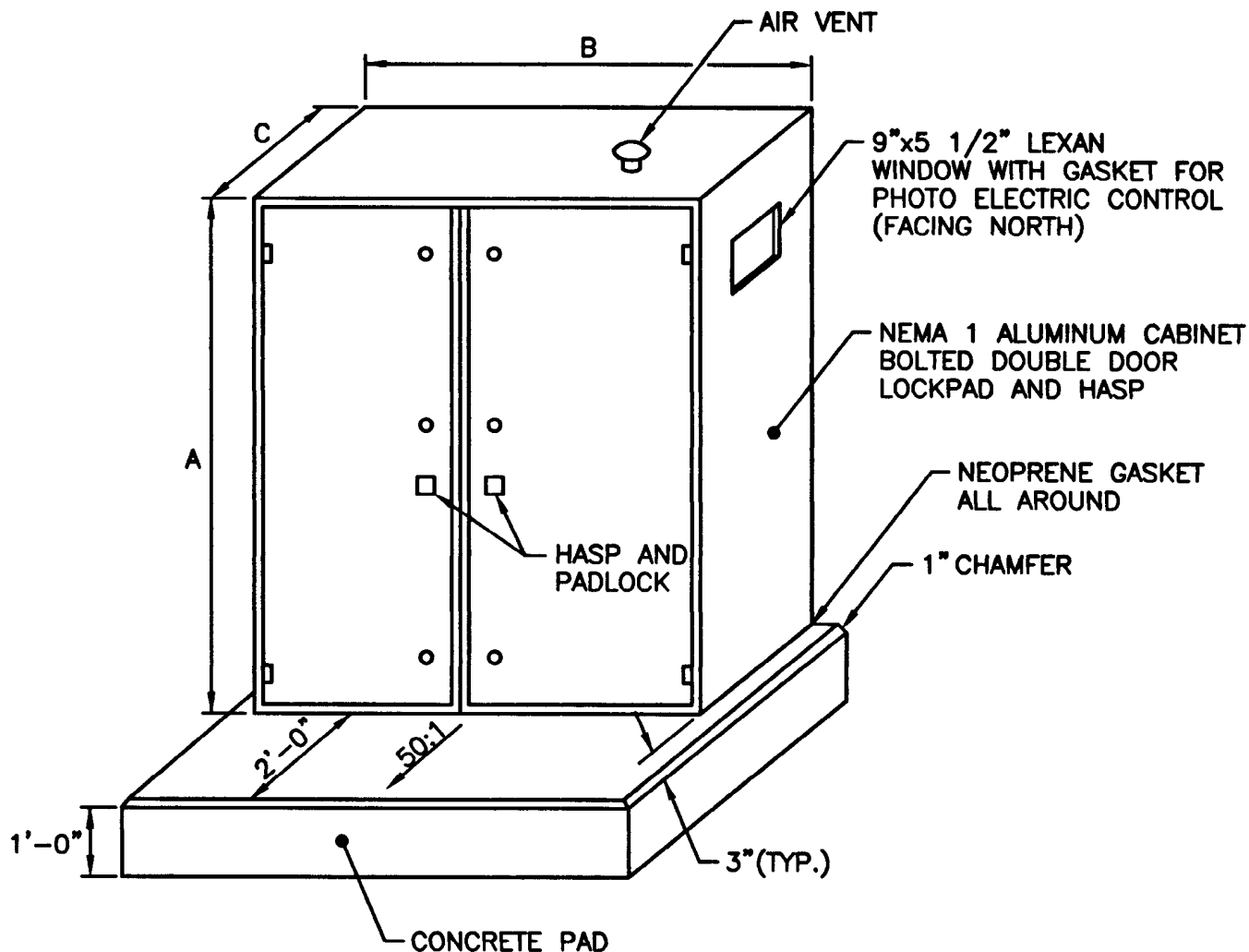
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE







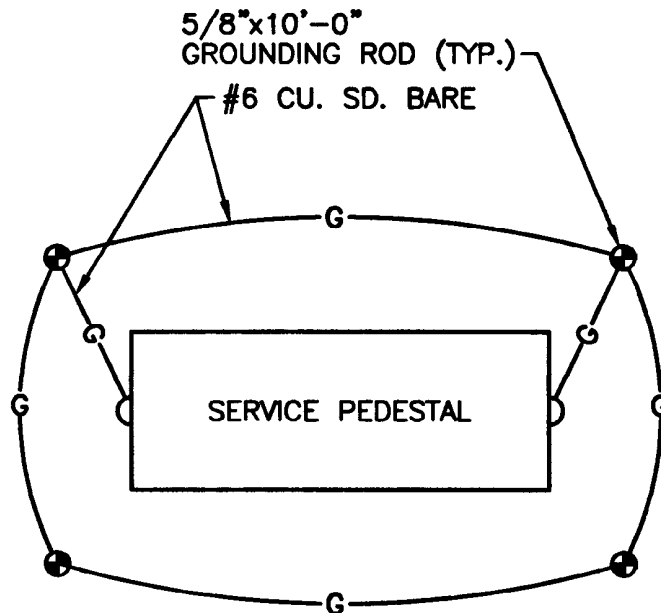
CABINET DIMENSIONS	A	B	C
120/240 OR 120/208 VOLT	4'-0" TO 4'-4"	3'-6" TO 4'-2"	1'-2" TO 2'-0"
240/480 VOLT	4'-0" TO 6'-0"	3'-6" TO 5'-0"	2'-0"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. PEDESTAL SHOULD BE LOCATED A MINIMUM OF 30'-0" FROM EDGE OF TRAVEL LANE OR BEHIND A BARRIER OR GUARDRAIL IF LESS THAN 30'-0".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			SERVICE PEDESTAL		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 18.4.0 </div>
NO.	BY	DATE			
 CHIEF ENGINEER TRANSPORTATION			 CHIEF DESIGN ENGINEER TRANSPORTATION		JUNE 15, 1998 ISSUE DATE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. #6 CU. BARE GROUND WIRE 1'-0" BELOW GRADE. ALLOW 3'-0" SLACK LEADS TO BOND AT GROUNDING LUGS IN CABINET.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

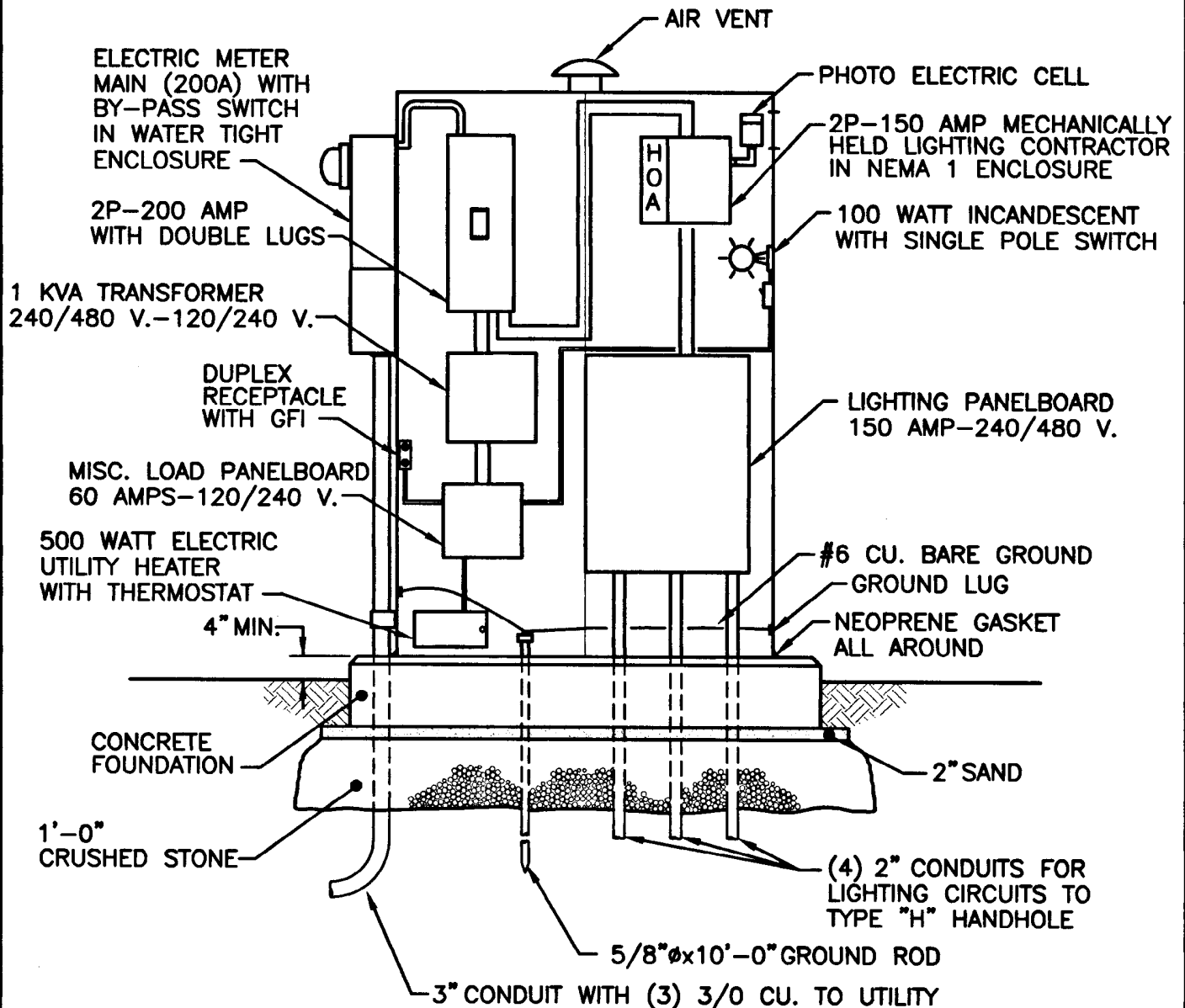
SERVICE PEDESTAL – GROUNDING DETAIL

James H. Capaldi
 CHIEF ENGINEER
 TRANSPORTATION

Edmund J. Parker Jr.
 CHIEF DESIGN ENGINEER
 TRANSPORTATION

JUNE 15, 1998
 ISSUE DATE





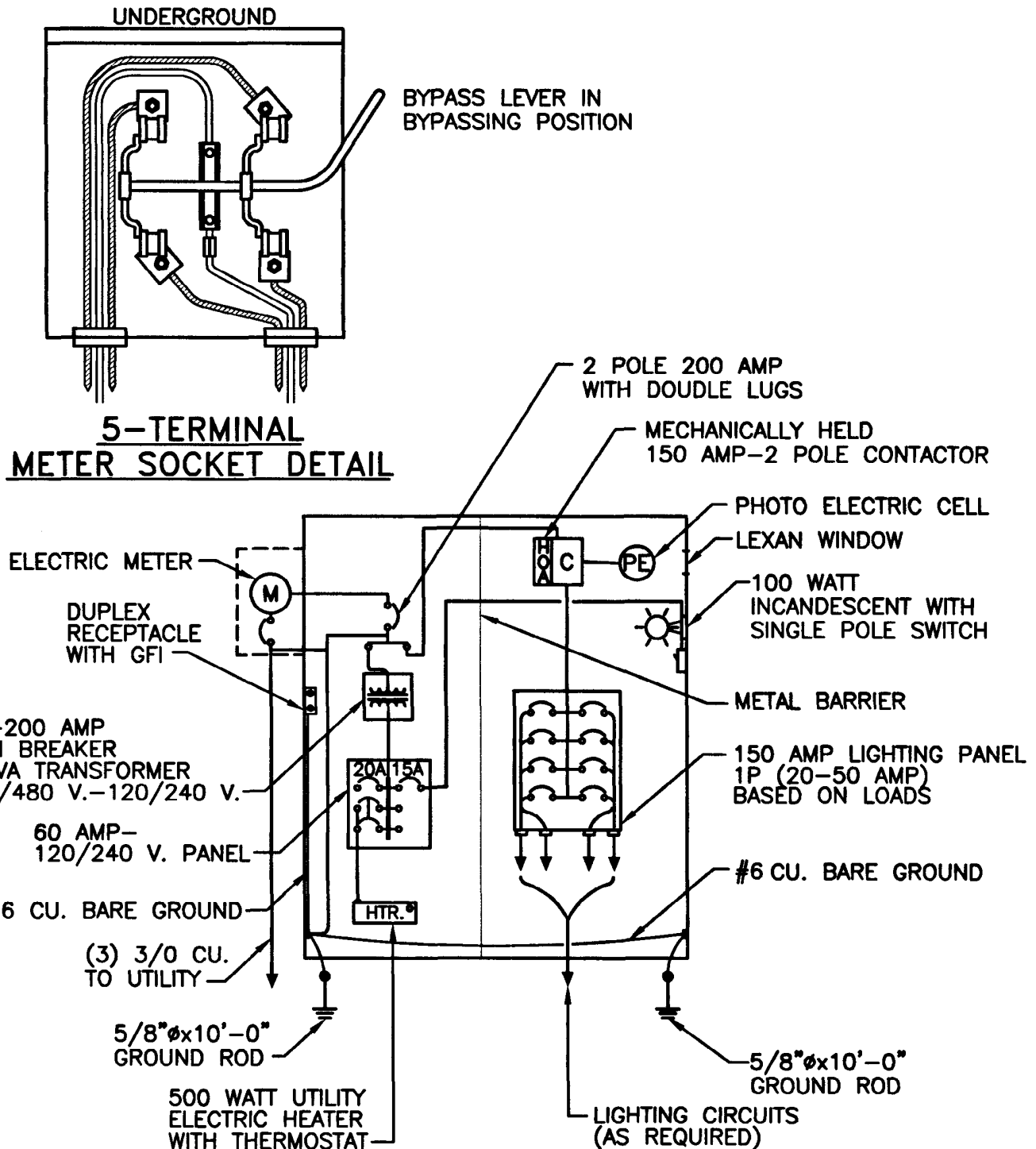
SWITCHGEAR DETAIL FRONT VIEW

NOTE:

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. APPROXIMATE DIMENSION 6'-0" (MAX.) x 4'-0" x 1'-6" TO 2'-0" (MAX.)

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			SERVICE PEDESTAL 240/480 VOLTS – 3W	<div><div>R.I. STANDARD 18.4.2</div></div>
NO.	BY	DATE		
			<div><div><div>James H. Casabelli</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>	



POWER SCHEMATIC

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. ON THREE-WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

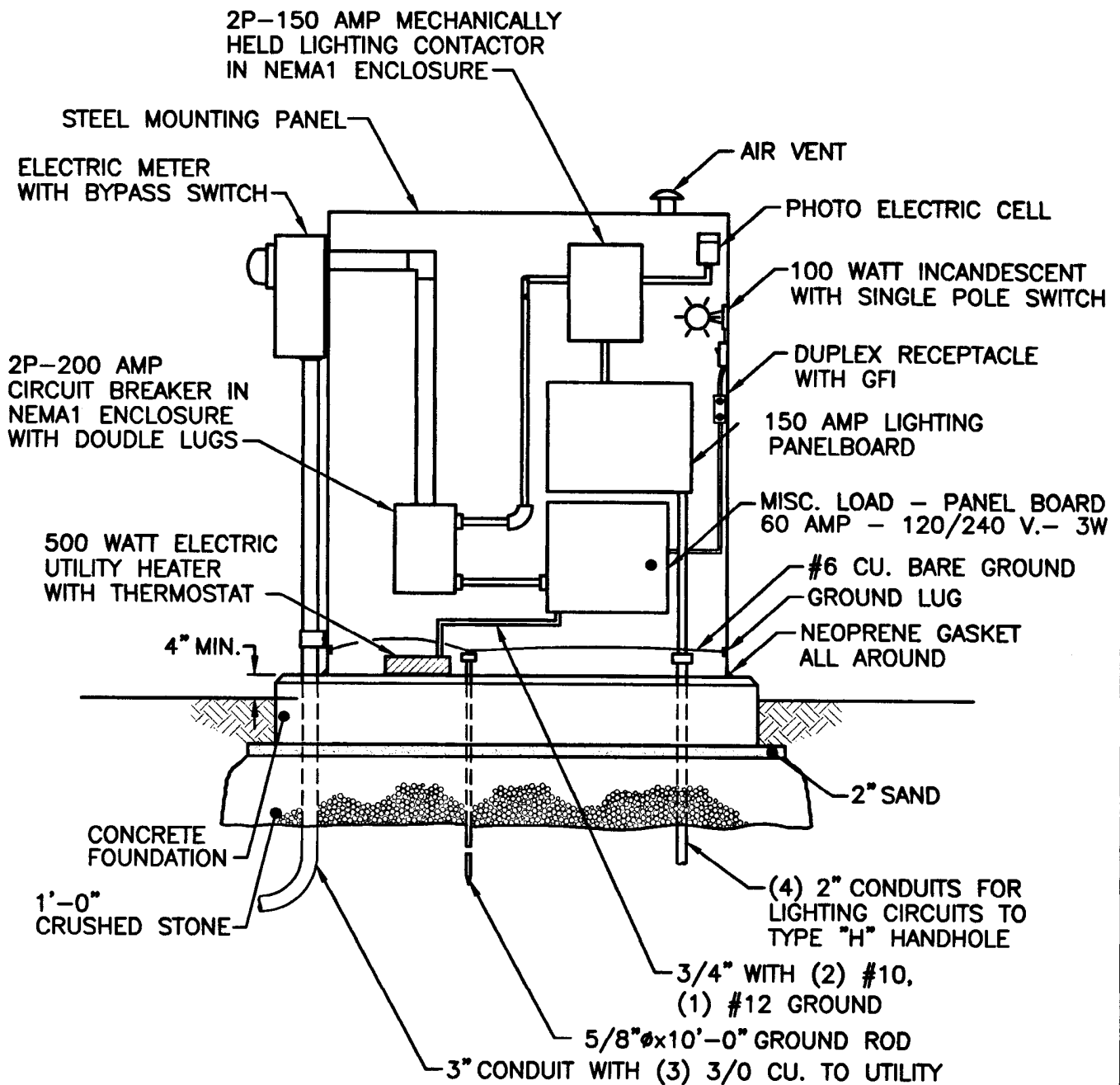
SERVICE PEDESTAL 240/480 VOLTS - 3W

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





SWITCHGEAR DETAIL FRONT VIEW

NOTES:

SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

SERVICE PEDESTAL
120/240 OR 120/208 VOLTS - 3W

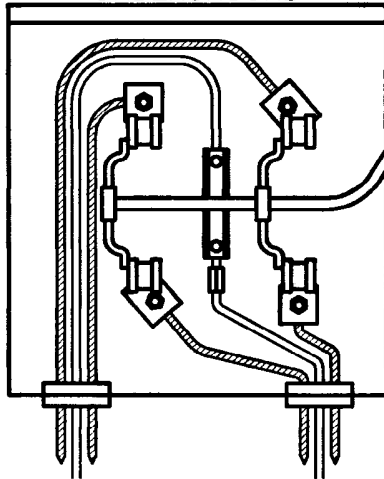
James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



UNDERGROUND



BYPASS LEVER IN BYPASSING POSITION

5-TERMINAL METER SOCKET DETAIL

HAND (ON/OFF)
AUTOMATIC SWITCH

MECHANICALLY HELD
150 AMP-2 POLE CONTACTOR

PHOTO ELECTRIC CELL

ELECTRIC METER
(SEE DETAIL)

DISTRIBUTION PANEL
LIGHTING AND GENERAL LOADS

2 POLE MAIN
BREAKER WITH
DOUBLE LUGS

100 WATT INCANDESCENT
WITH SINGLE POLE SWITCH

200A
MAIN

150 AMP LIGHTING PANEL
1P (20-50 AMP)
BASED ON LOADS

GROUNDING LUG

DUPLEX RECEPTACLE
WITH GFI

3" C-3-3/0 CU.
XLPE 600V
TO ELECTRIC
COMPANY

#6 CU. BARE
GROUND WIRE

#6 CU. BARE TO
SERVICE GROUND
AND GROUNDING ROD

CONDUITS TO LIGHTING
CIRCUITS (AS REQUIRED)

500 WATT UTILITY ELECTRIC
HEATER WITH THERMOSTAT (240 V.)

POWER SCHEMATIC

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. ON THREE-WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

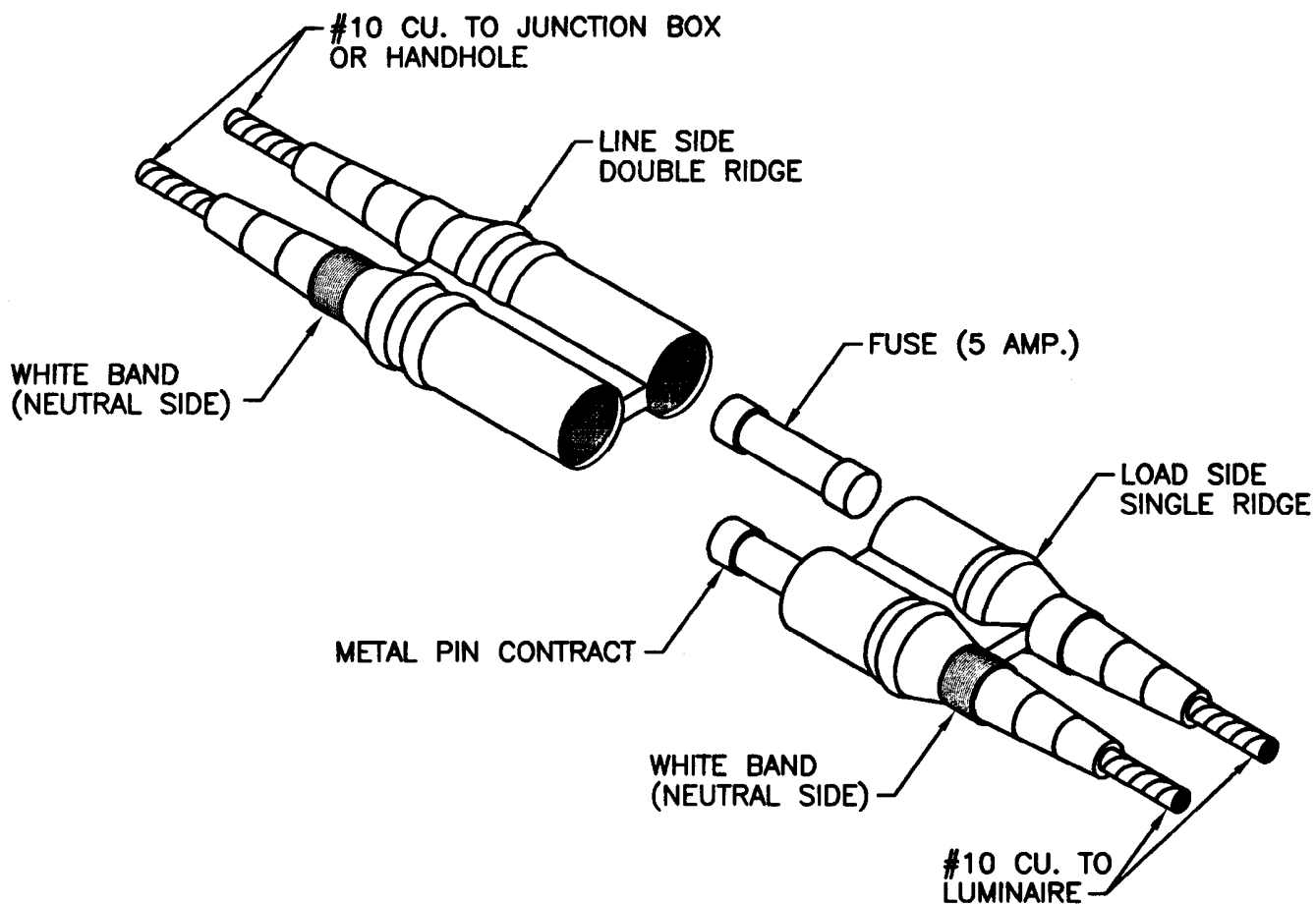
SERVICE PEDESTAL
120/240 OR 120/208 VOLTS - 3W

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
 ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. LOCATED IN HANDHOLE AT BASE OF ALUMINUM POLE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

PHASE-NEUTRAL CONNECTOR KIT

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

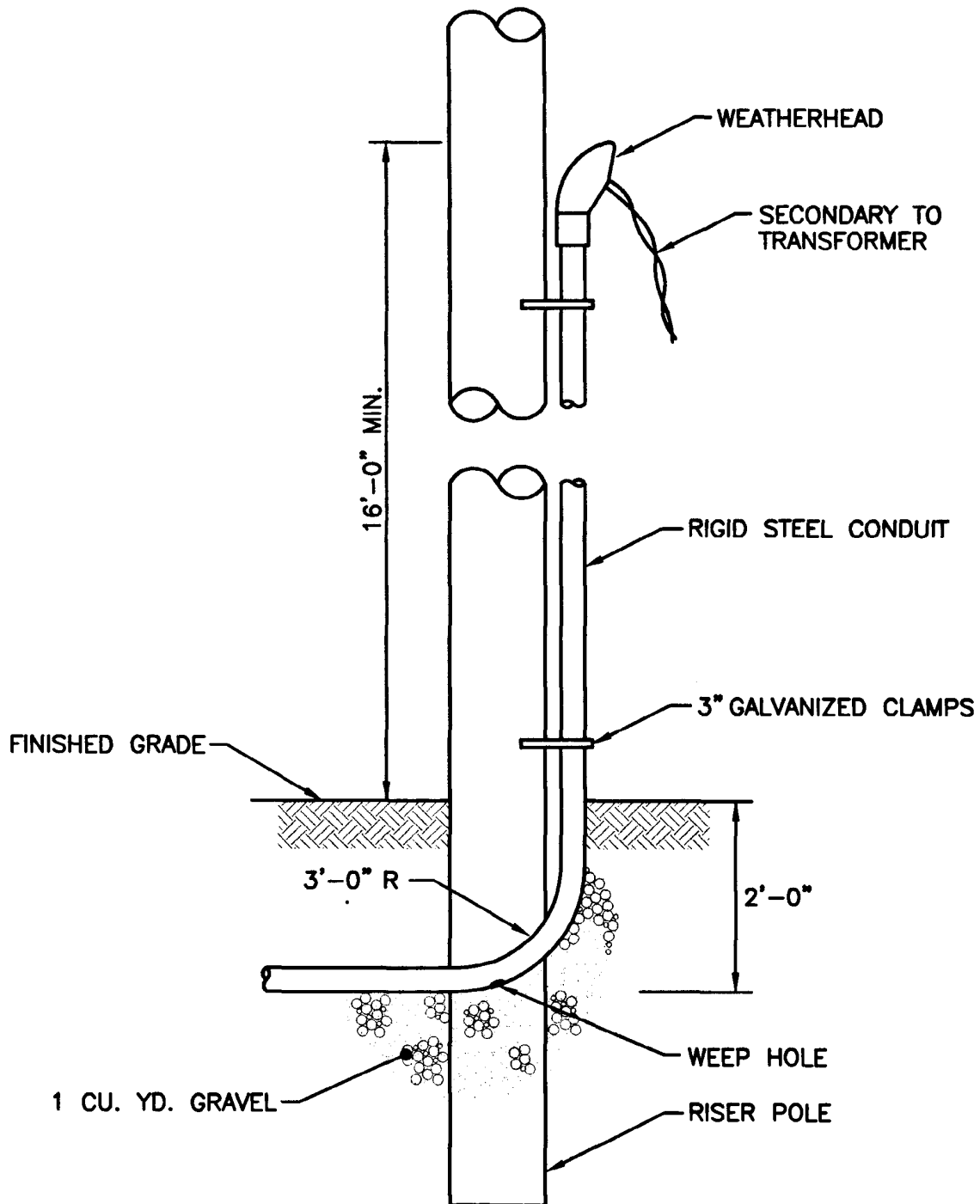
TRENCH DETAIL FOR CONDUIT IN EXISTING ROADWAY

James H. Gault
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

**R.I.
STANDARD
18.6.0**



NOTE:

SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

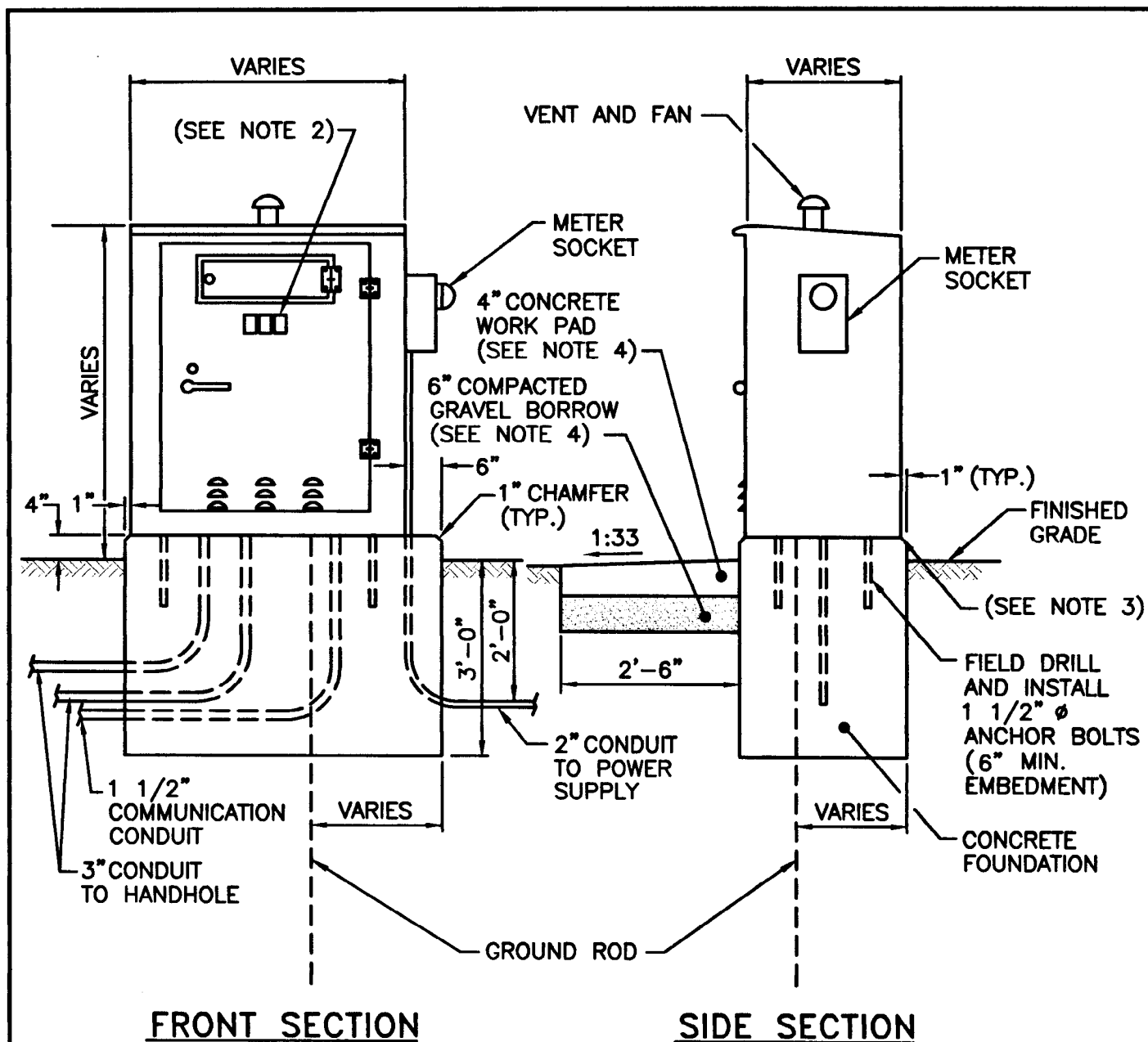
RISER POLE DETAIL

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
18.7.0



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD SPECIFICATION.
2. TRAFFIC SIGNAL NUMBER TO BE STENCILED ON EXTERIOR AND INTERIOR OF ALL CABINET DOORS (GROUND AND POLE MOUNTED). STENCIL SHALL BE 3" HIGH BLOCK LETTERS APPLIED WITH BLACK PAINT.
3. SILICONE CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHER TIGHT SEAL.
4. IN UNPAVED AREAS A 4'-0"x2'-6" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE CABINET DOOR. PAD AND FOUNDATION SHALL BE COMPLETED IN ONE POUR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

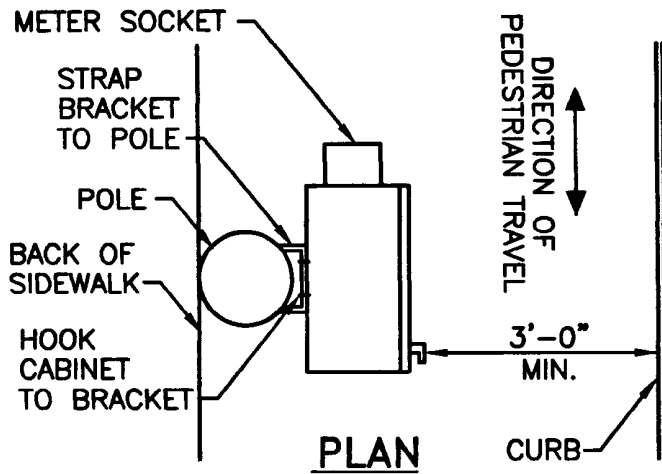
**GROUND MOUNTED
CONTROLLER INSTALLATION**

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

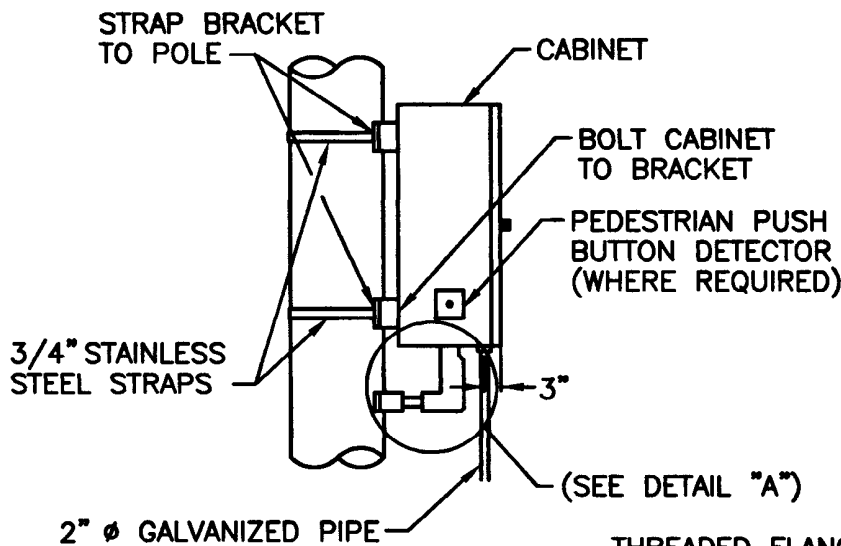
JUNE 15, 1998
ISSUE DATE



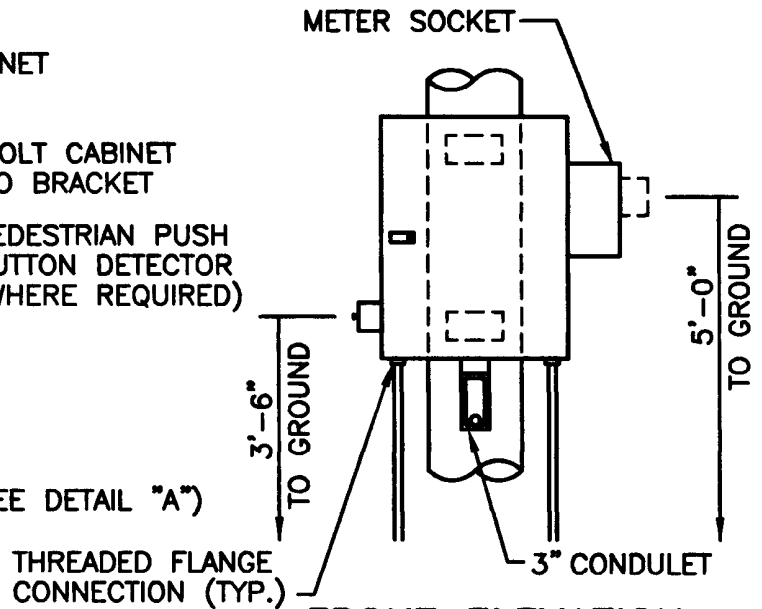


NOTES:

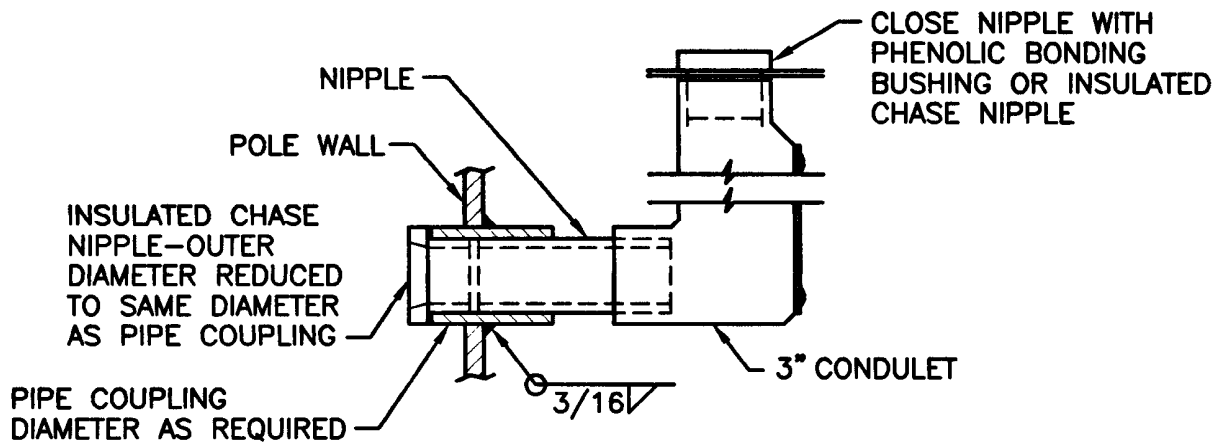
1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD DETAILS.
2. THE CABINET SHALL BE MOUNTED SO THAT HOLES IN THE POLE FOR WIRE ACCESS FITTINGS ARE AT 90° TO THE AXIS OF POLE LOAD.
3. LOCATE BRACKETS AND ATTACHING BOLTS TO CLEAR EQUIPMENT WITHIN CABINET.
4. IN UNPAVED AREAS, A 4'-0"x2'-6"x4" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE DOOR.
5. ALL HARDWARE SHALL BE STAINLESS STEEL.
6. LINE CONDUCTORS SHALL BE PROTECTED TO THE METER.



SIDE ELEVATION



FRONT ELEVATION



DETAIL "A"

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**POLE MOUNTED
CONTROLLER INSTALLATION**

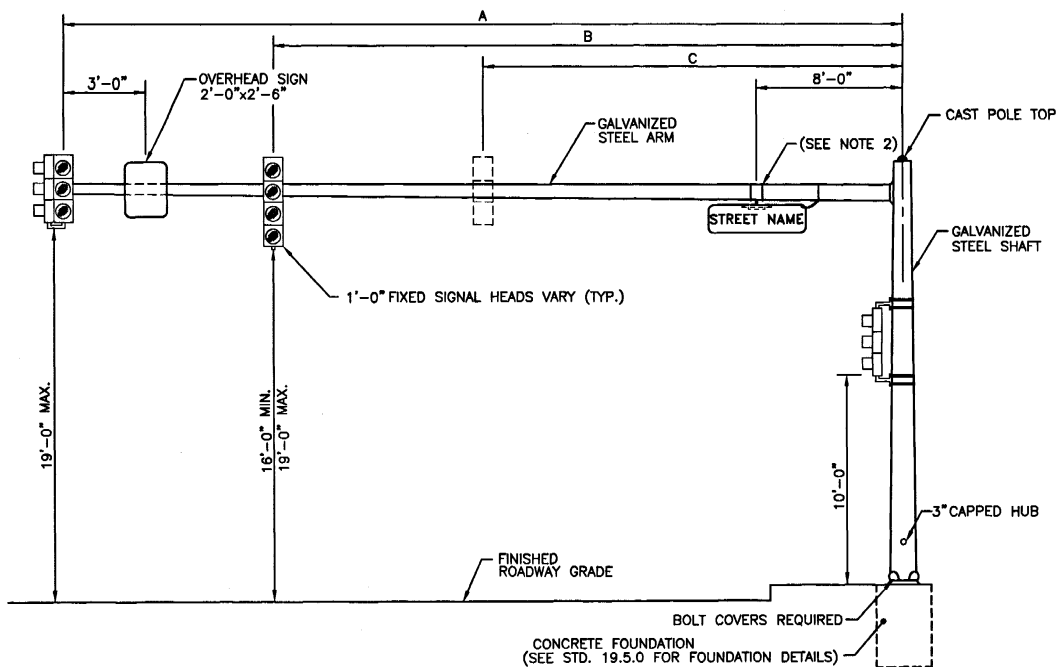
REVISIONS		
NO.	BY	DATE

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
 2. MOUNTING BRACKET, MOUNTING SECTION WITH STAINLESS STEEL BANDS MUST BE ADJUSTABLE TO THE DIRECTION OF TRAFFIC.
 3. MOUNTING SHALL HOLD THE SIGN RIGIDLY IN PLACE AND RESIST MOVEMENT IN ALL DIRECTIONS.
 4. ALL SIGNALS SHOULD INCLUDE 5" BACKPLATES FOR DESIGN PURPOSES.
 5. ALL STREET SIGNS ARE 1'-6" HIGH BY 6'-0" LONG.
 6. DOOR FACE AND VISORS SHALL BE PAINTED FLAT BLACK.
 7. SIGNAL HEADS SHALL BE PLACED ON THE MAST ARM SO THAT THE RED LENSES ARE AT EQUAL HEIGHT ABOVE THE PAVEMENT SURFACE.

MAST ARM TYPE	DIMENSION A (FT.)	SIGNAL CONFIGURATION A	SIGNAL WEIGHT/AREA	DIMENSION B (FT.)	SIGNAL CONFIGURATION B	SIGNAL WEIGHT/AREA	DIMENSION C (FT.)	SIGNAL CONFIGURATION C	SIGNAL WEIGHT/AREA	FOUNDATION NO.
RI-20	20	1 WAY/3 SEC	74 LB./8.5 S.F.	12	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-50
RI-25	25	2 WAY/4 SEC	175 LB./17.3 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-60
RI-30	30	2 WAY/4 SEC	175 LB./17.3 S.F.	20	2 WAY/3 SEC	158 LB./13.3 S.F.	N/A	N/A	N/A	F-70
RI-35	35	2 WAY/4 SEC	175 LB./17.3 S.F.	25	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-70
RI-40	40	3 WAY/3 SEC	202 LB./18.1 S.F.	30	2 WAY/3 SEC	158 LB./13.3 S.F.	20	1 WAY/3 SEC	74 LB./8.5 S.F.	F-90
RI-45	45	3 WAY/4 SEC	255 LB./23.7 S.F.	30	1 WAY/3 SEC	74 LB./8.5 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	F-90
RI-50	50	3 WAY/4 SEC	255 LB./23.7 S.F.	30	1 WAY/4 SEC	90 LB./10.8 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	F-100

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL MAST ARM

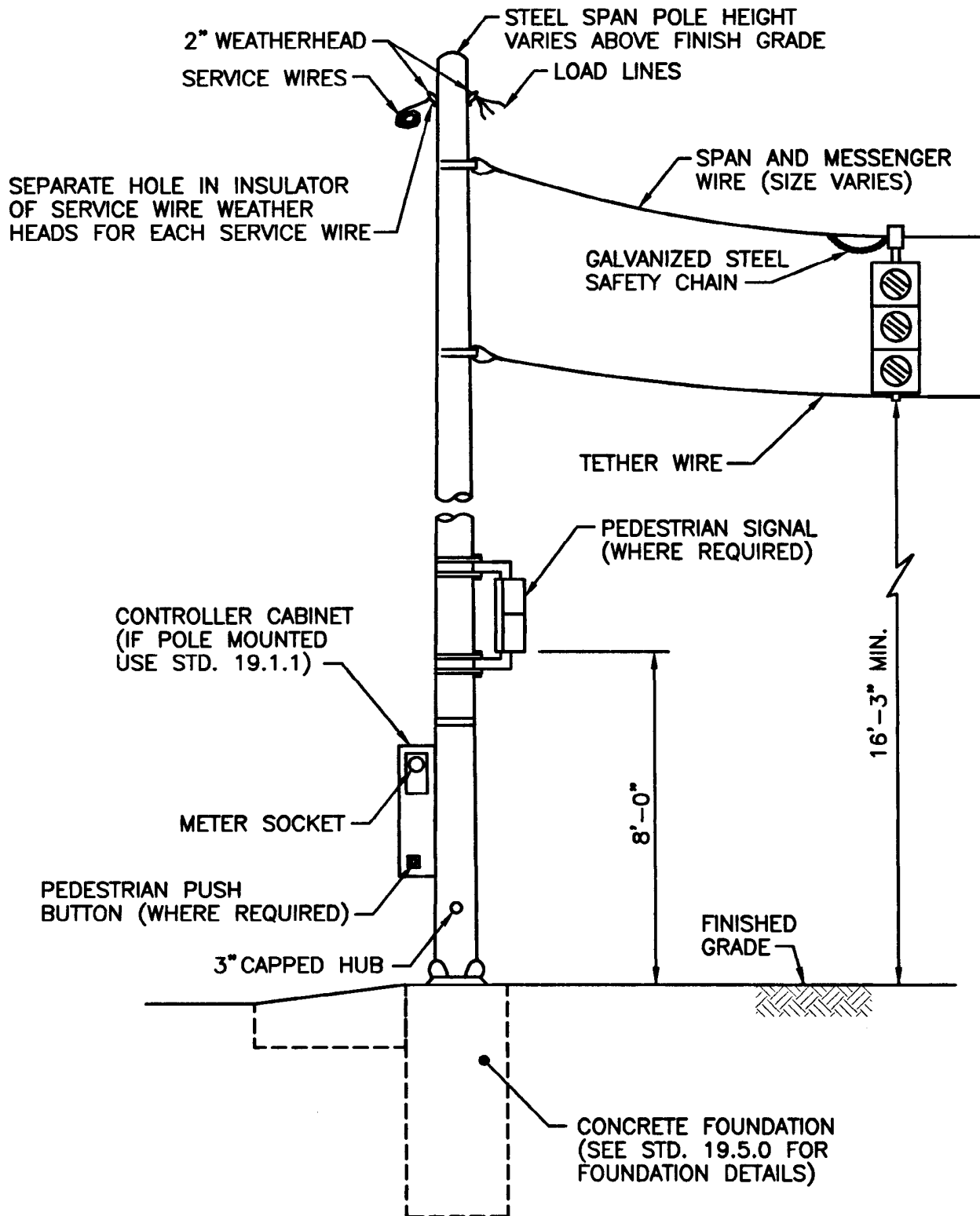
REVISIONS

NO. BY DATE

ENGINEER
DATE
DRAWN

R.I. STANDARD
19.2.0

JUNE 15, 1998
ISSUE DATE



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL SPAN POLE

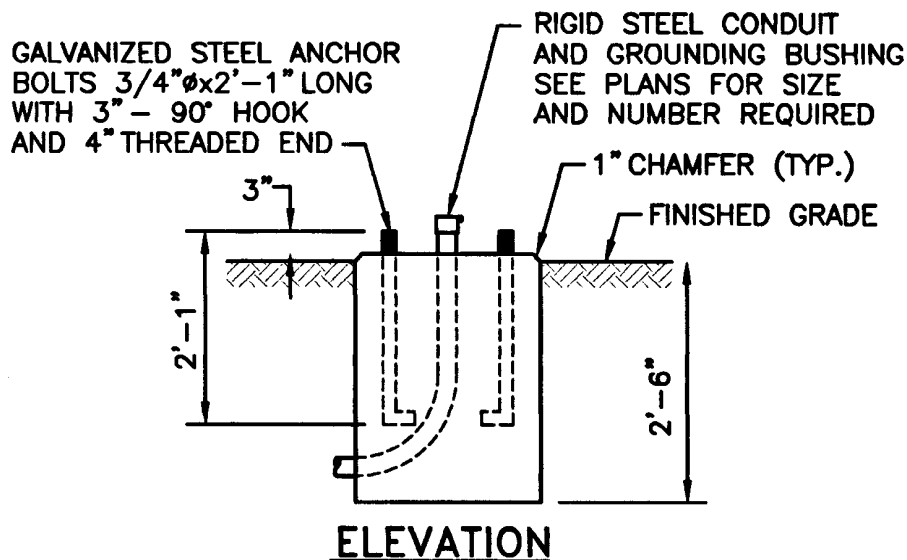
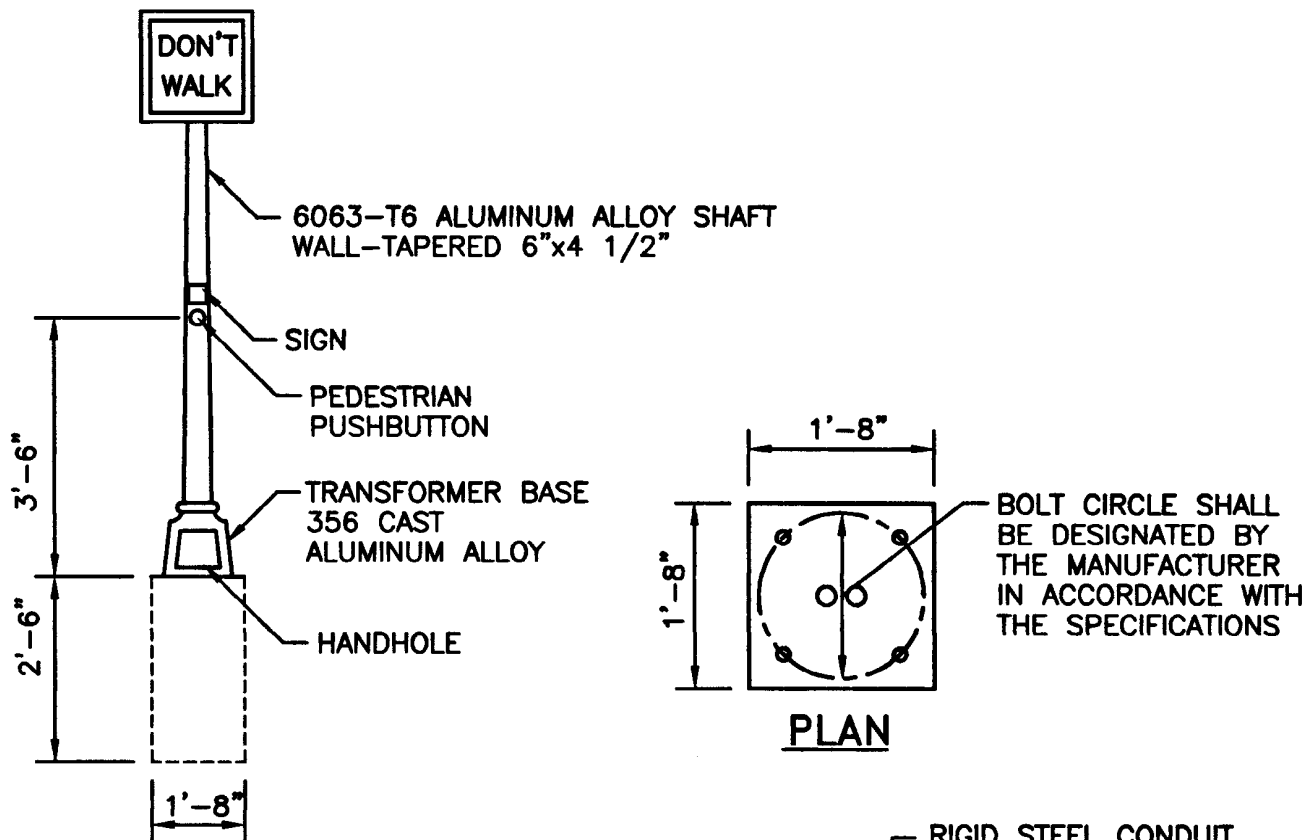
REVISIONS		
NO.	BY	DATE

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





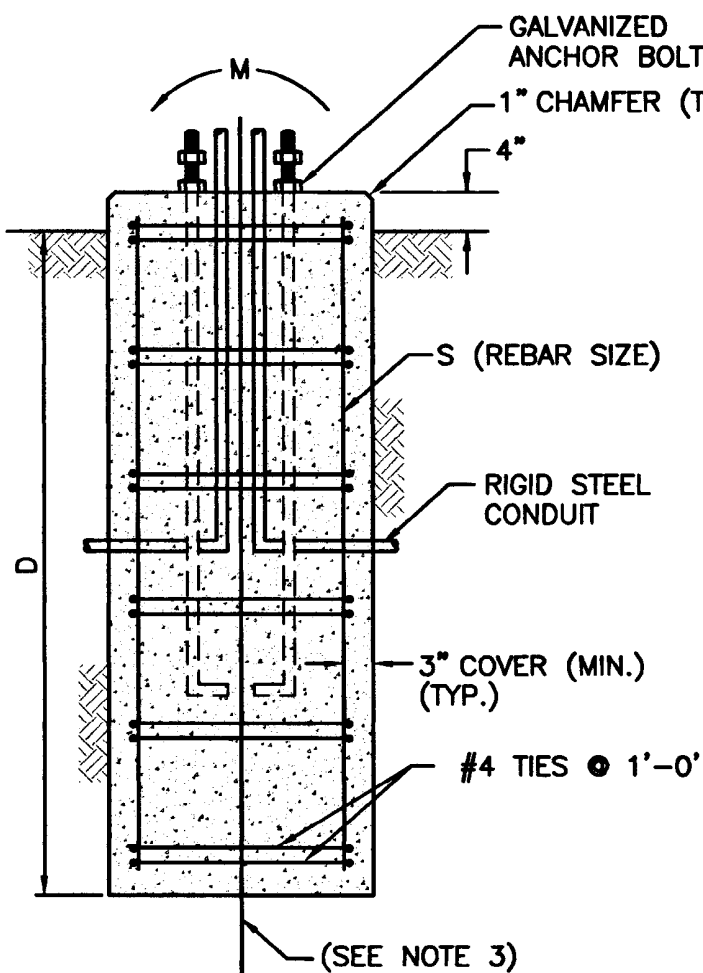
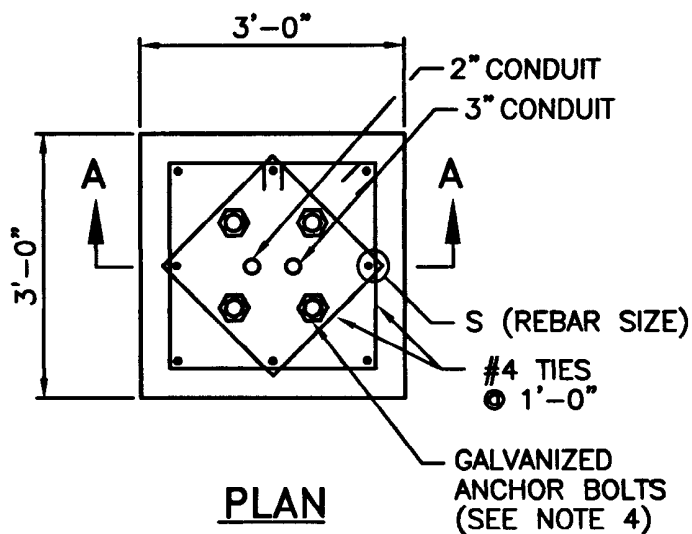


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. PRECAST CONCRETE FOUNDATIONS MAY BE PROVIDED AS AN ALTERNATE TO CAST IN-PLACE FOUNDATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			ALUMINUM PEDESTAL	<div><div>R.I. STANDARD 19.4.0</div></div>
NO.	BY	DATE		
			<div><div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div></div>	



FOUNDATION NO.	FOUNDATION DIMENSIONS		
	M (FT. K.)	D	S
F-40	0 TO 40	6'-6"	8-#5
F-50	50	7'-0"	8-#6
F-60	60	7'-6"	8-#7
F-70	70	8'-0"	8-#7
F-80	80	9'-0"	8-#7
F-90	90	9'-6"	8-#8
F-100	100	10'-0"	8-#8
F-110	110	10'-6"	12-#8
F-120	120	11'-0"	12-#8

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. M (MOMENT AT BASE) TO BE FURNISHED BY MAST ARM FABRICATOR.
3. GROUND ROD 5/8" ϕ x 10'-0" LONG, IF CONTROLLER IS POLE MOUNTED.
4. ANCHOR BOLT LENGTH AS REQUIRED TO DEVELOP THE CALCULATED BOLT TENSION.
5. CAST FOUNDATIONS AGAINST UNDISTURBED SOIL.
6. DESIGN SOIL PRESSURE = 1250 PSF.
7. REFERENCE STD. 19.2.0 AND 19.3.0.
8. BOLT TEMPLATE AND WOOD FORMS SHALL BE REMOVED PRIOR TO BACKFILLING.
9. M (MOMENT AT BASE) MAY BE REDUCED (DIVIDED BY 1.4) FOR LOADING COMBINATIONS CONTAINING WIND.
10. NO FOUNDATIONS TO BE PLACED IN CLAY, SILT OR MUCK.
11. PRIOR TO THE INSTALLATION OF POLE THE FOUNDATION SHALL BE MARKED BY A TRAFFIC CONE, DOUBLE NUTTED TO THE ANCHOR BOLTS.
12. FOUNDATION DESIGN IS BASED ON WELL GRADED GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

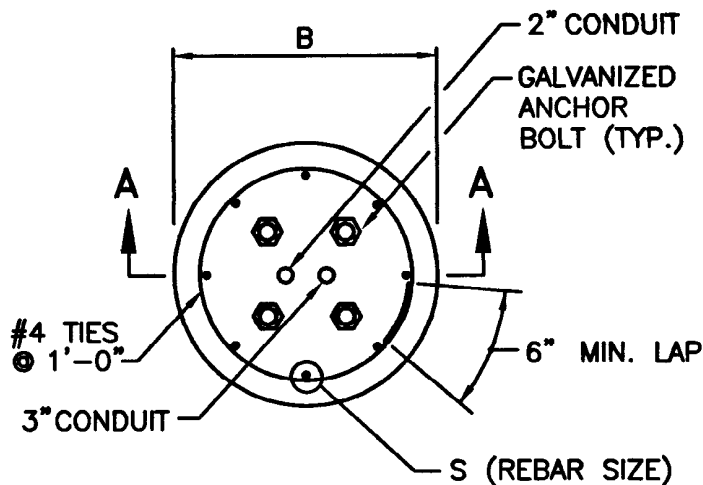
**MAST ARM AND
SPAN POLE FOUNDATION**

John A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

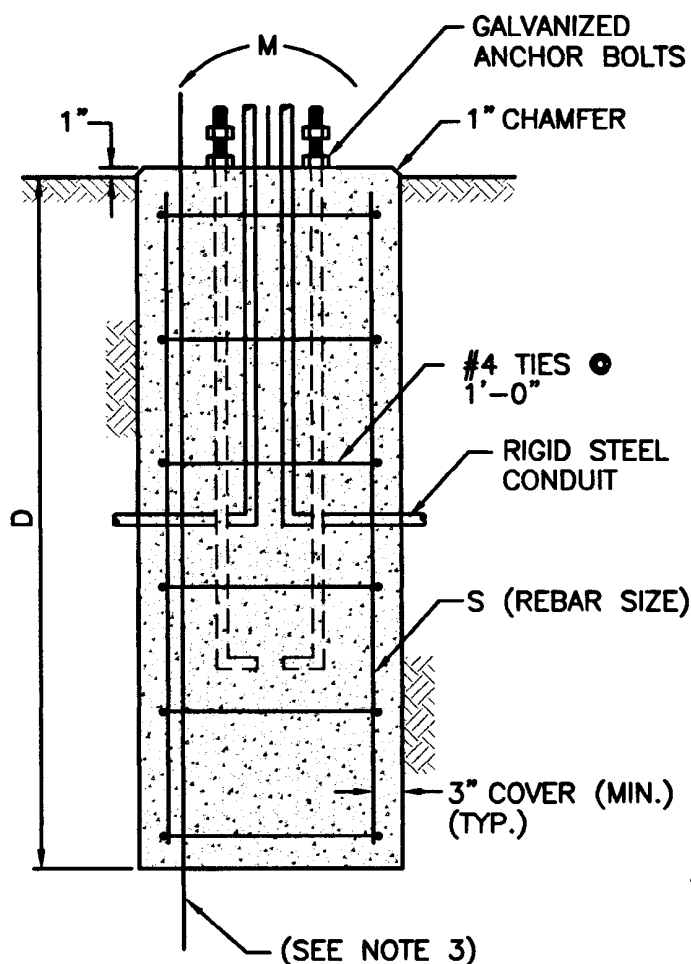
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
19.5.0



PLAN



SECTION A-A

FOUNDATION DIMENSIONS			
M(FT. K.)	B	D	S
0 TO 30	2'-6"	6'-0"	8-#5
40	3'-0"	6'-6"	8-#5
50	3'-0"	7'-0"	8-#6
60	3'-0"	7'-6"	8-#7
70	3'-0"	8'-0"	8-#7
80	3'-0"	9'-0"	8-#7
90	3'-0"	9'-6"	8-#8
100	3'-0"	10'-0"	8-#8
110	3'-0"	10'-6"	12-#8
120	3'-0"	11'-0"	12-#8

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. M (MOMENT AT BASE) TO BE FURNISHED BY SPAN POLE FABRICATOR.
3. GROUND ROD 5/8" ϕ x 10'-0" LONG, IF CONTROLLER IS POLE MOUNTED.
4. CAST FOUNDATIONS AGAINST UNDISTURBED EARTH.
5. REFERENCE STD. 19.2.0.
6. NO FOUNDATIONS TO BE PLACED IN CLAY, SILT OR MUCK.
7. M (MOMENT AT BASE) MAY BE REDUCED (DIVIDED BY 1.4) FOR LOADING COMBINATIONS CONTAINING WIND.
8. DESIGN SOIL PRESSURE 1250 PSF.
9. PRIOR TO INSTALLATION OF THE POLES, THE FOUNDATION BOLTS SHALL BE MARKED BY A TRAFFIC CONE AND DOUBLE-NUTTED TO THE ANCHOR BOLT.
10. FOUNDATION DESIGN IS BASED ON WELL GRADED GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

ORNAMENTAL MAST ARM FOUNDATION

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



AS SPECIFIED ON PLANS OR AS DIRECTED BY THE ENGINEER

PAYMENT FOR CONDUIT INSTALLATION AND PAVEMENT CUTOUTS TO BE INCLUDED IN INDUCTANCE LOOP INSTALLATION

HANDHOLE AS SPECIFIED ON PLANS. SEE STANDARD SHEETS FOR HANDHOLE INSTALLATION DETAILS

SPLICE (SEE DETAIL "E")

SHIELDED LEAD IN CONDUIT AS SPECIFIED ON PLANS (SEE DETAIL "D")

1" MIN. RIGID OF FLEXIBLE LIQUID TIGHT CONDUIT

SHOULDER OR SIDEWALK

(SEE DETAIL "C")

LOOP WIRES TO BE TWISTED 2 TURNS/FT. OR AS DIRECTED BY THE ENGINEER

(SEE DETAIL "A")

SAWCUT

PAVEMENT EDGE OR CURB

PAVEMENT JOINT

PAVEMENT JOINT

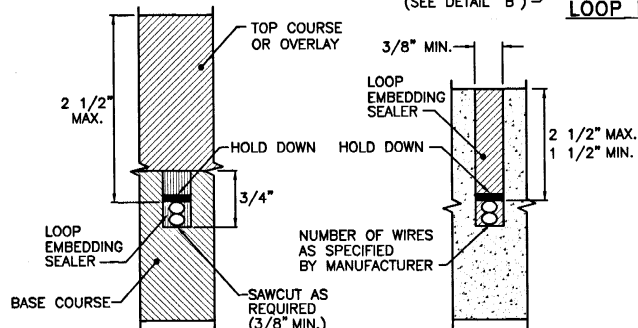
PAVEMENT JOINT

2'-0" MIN. (SEE DETAIL "B")

4'-0" MIN.

4'-0" MIN.

LOOP INSTALLATION DETAIL

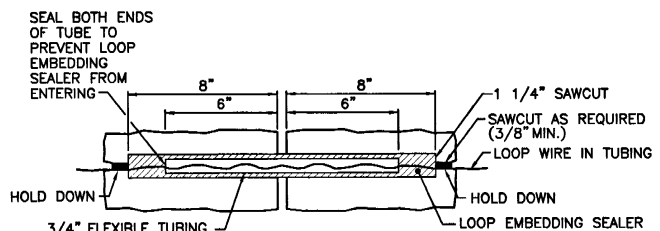


SAWCUT CROSS SECTION IN ASPHALT WHERE AN OVERLAY IS BEING PLACED

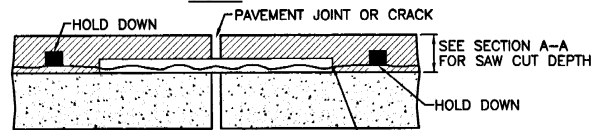
SECTION A-A

NOTE: USE SHORT (2" TYP.) PIECE OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

SAWCUT CROSS SECTION IN CONCRETE OR ASPHALT



PLAN



SIDE ELEVATION

DETAIL "A"

CROSSING PAVEMENT JOINTS OR CRACKS

SHEET 1 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

INDUCTANCE LOOP VEHICLE DETECTOR INSTALLATION DETAILS

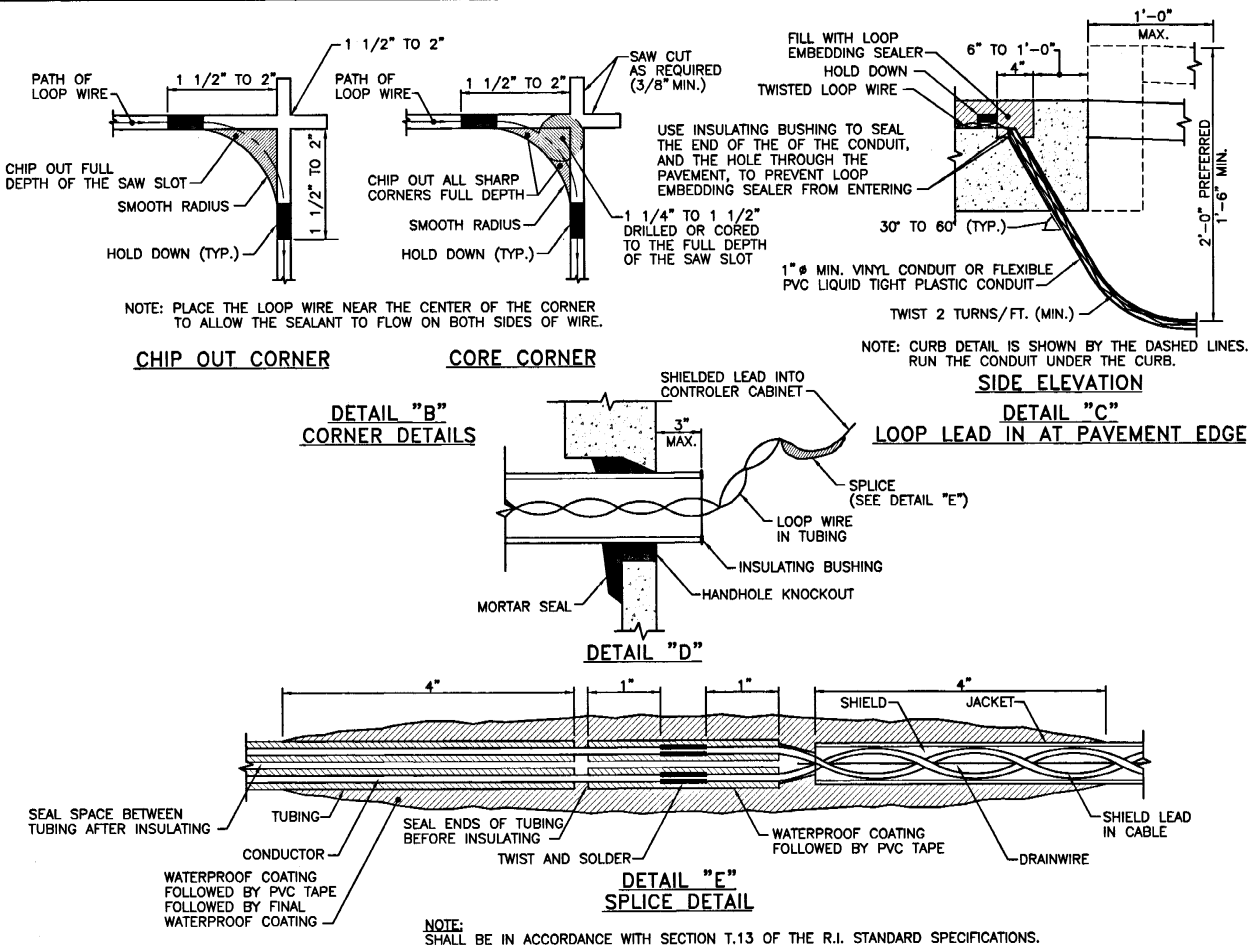
JUNE 15, 1998
ISSUE DATE

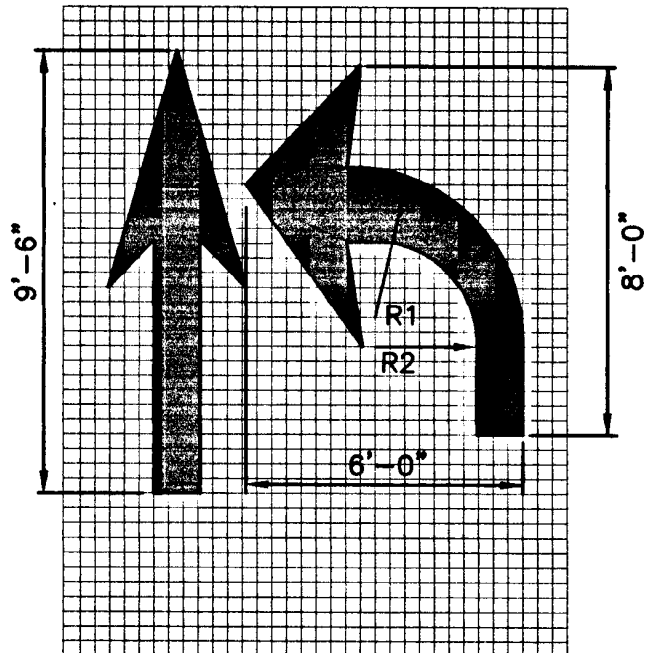
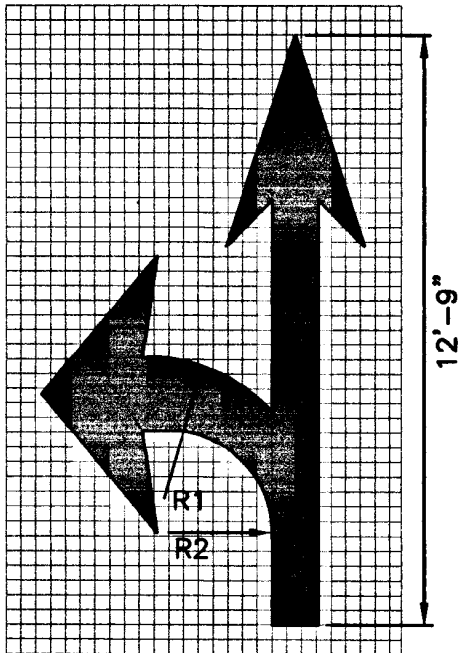
SHARP JOHN
DESIGNER

SHARP JOHN
DESIGNER

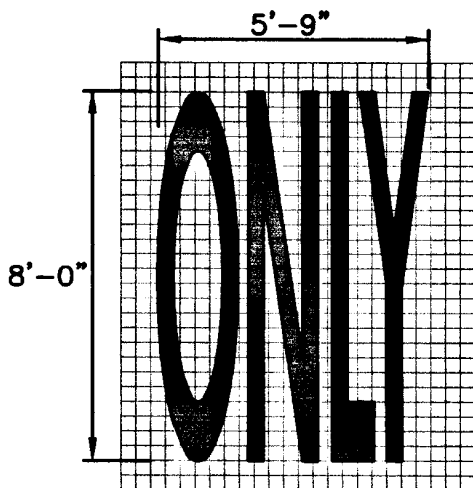
REV/SIONS
NO. BY DATE







R1 = 3'-2"
R2 = 2'-2"



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGES, INCLUDING ARROWS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTER FOR LOW SPEED ROADS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTER UNDER ANY CONDITIONS.
3. THE SPACING OF THE PAVEMENT MARKINGS WILL BE AS SHOWN ON THE PLAN AND AS PER THE MUTCD.
4. SYMBOLS AND WORDS SHALL MEET THE REQUIREMENTS OF THE FHWA "STANDARD ALPHABET AND SYMBOLS FOR HIGHWAY PAVEMENT MARKINGS."

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

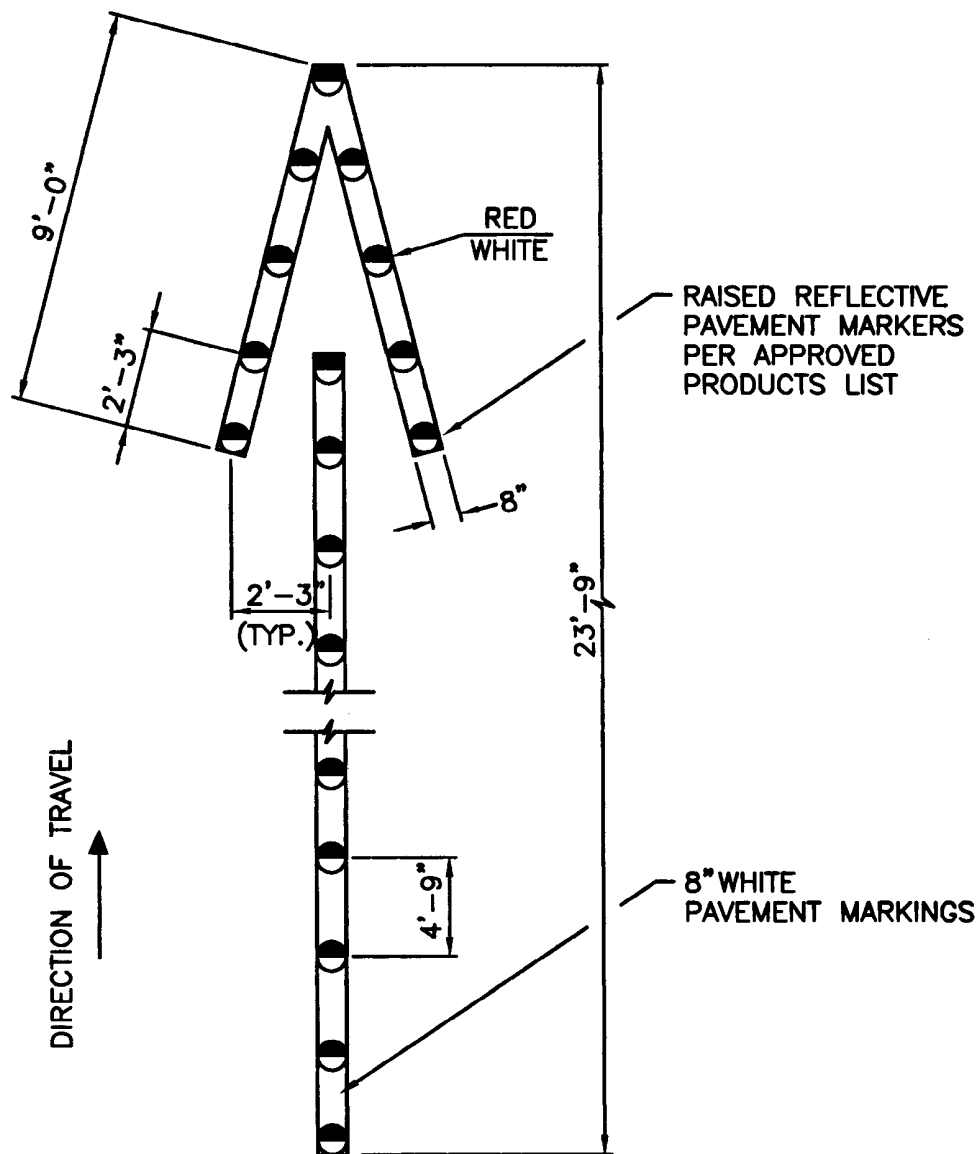
PAVEMENT MARKINGS ARROWS AND ONLY

James H. Casella
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





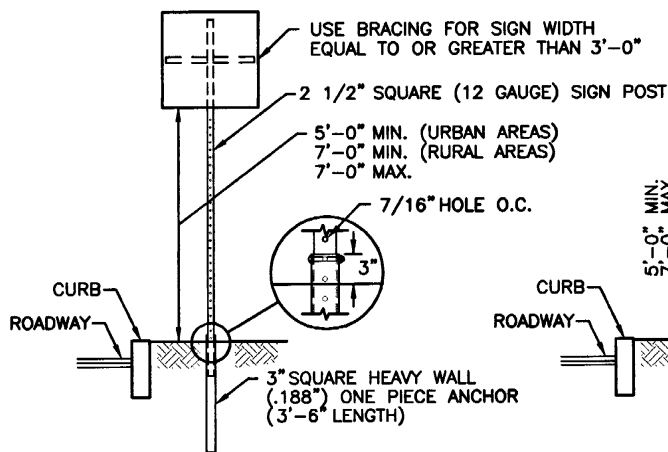


NOTES:

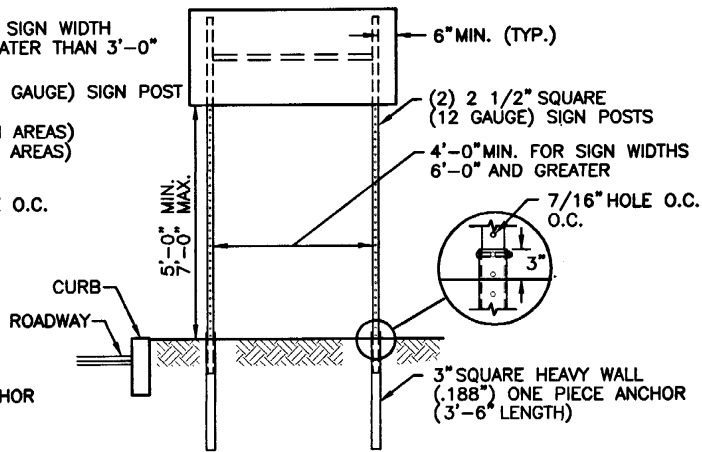
1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED AFTER THE 8" ARROW HAS BEEN PLACED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

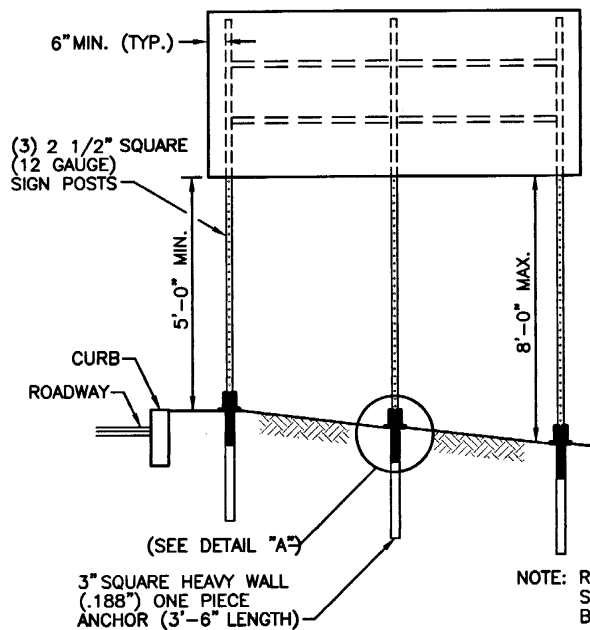
REVISIONS			BI-DIRECTIONAL CONTROL DEVICE		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 20.2.0 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">  CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>		



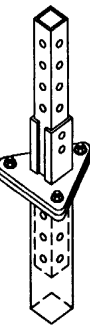
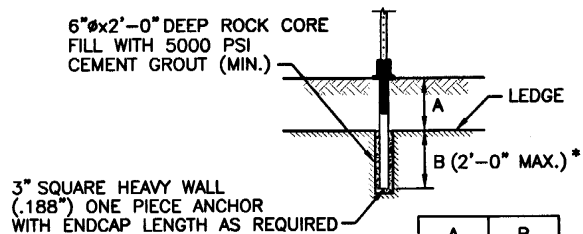
SIGNS UP TO 12 SQ. FT.



SIGNS UP TO 28 SQ. FT.



SIGNS UP TO 8'-0" Wx4'-0" H



* AT WEATHERED ROCK, DEPTH AS PER ENGINEER

**TYPICAL POST AT LEDGE
LESS THAN 3'-0" BELOW GRADE**

A	B
3'-0"	1'-0"
2'-0"	1'-0"
1'-0"	1'-6"
0"	2'-0"

NOTE: RECOMMENDED TORQUE ON
SLIP-BASE FLANGE HEAD
BOLT AND NUT 40 FT. LBS.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SUPPORTS HAVE BEEN DESIGNED IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR A 10-YEAR MEAN WIND RECURRENCE INTERVAL.
3. FOR INSTALLATION IN GROUND OR BITUMINOUS CONCRETE DRIVE SIGN POST ANCHOR TO REQUIRED DEPTH SO THAT THE HOLE WILL MATCH TO SIGN POST ABOVE GROUND FOR THE BOLT CONNECTION. INSERT SIGN POST AND BOLT IN PLACE.
4. FOR INSTALLATION IN CONCRETE SEE STD. 25.3.0 AND FOLLOW THE PROCEDURE IN NOTE 2.
5. FOR INSTALLATION IN LEDGE LESS THAN 3'-0" BELOW GRADE SEE DETAIL ABOVE.
6. EDGE OF SIGN SHALL BE 1'-6" (MIN.) FROM EDGE OF CURB IN URBAN AREAS AND 6'-0" (MIN.) FROM EDGE OF CURB IN EDGE OF CURB IN RURAL AREAS.
7. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. BREAKAWAY SIGN SUPPORTS SHALL BE FABRICATED FROM STEEL AND SHALL CONFORM TO THE BREAKAWAY DESIGN SHOWN ON THIS SHEET.
9. STEEL POSTS SHALL CONFORM TO ASTM-A361, FY= 55 KSI. THE CROSS SECTION OF THE POST SHALL BE SQUARE TUBE FORMED OF 12 GAUGE (.105" U.S.S. GAUGE) COLD-ROLLED CARBON STEEL SHEETS WHICH HAVE BEEN ZINC COATED (1.25 OZ.) CONFORMING TO ASTM-A525, CAREFULLY ROLLED TO SIZE AND WELDED DIRECTLY IN THE CORNER BY HIGH FREQUENCY RESISTANCE WELDING OR EQUAL AND EXTERNALLY SCARED TO AGREE WITH CORNER RADII. STANDARD CORNER RADIUS SHALL BE 3/32" PLUS OR MINUS 1/64".
10. ALL BOLTS SHALL CONFORM TO ASTM-A307, CLASS A.
11. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS PER ASTM-A153.
12. FOR SIGNS GREATER THAN 32 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SIGN POST SELECTION AND INSTALLATION DETAILS
SQUARE POST (SIGNS UP TO 8'-0" Wx4'-0" H)**

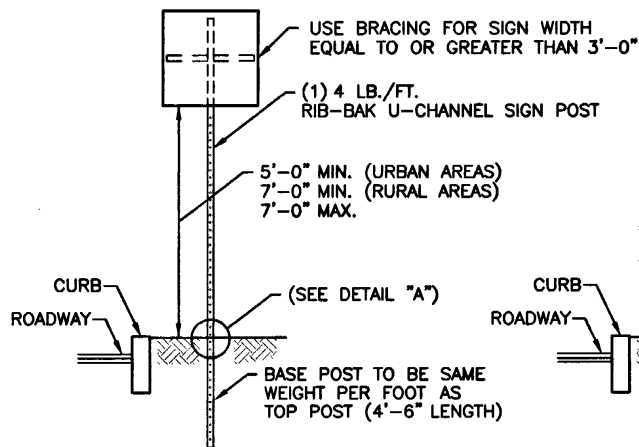
REVISIONS		
NO.	BY	DATE

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

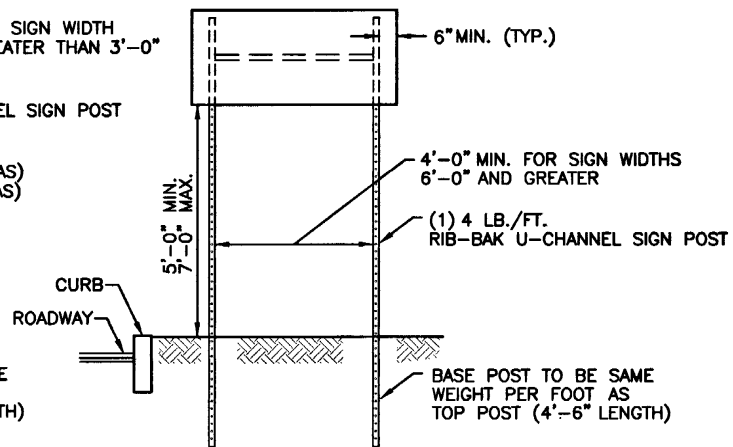
Edward J. P. ...
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

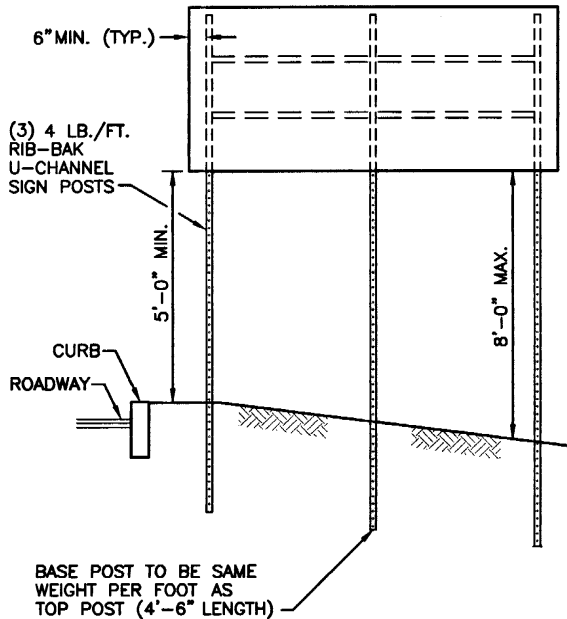
R.I.
STANDARD
24.1.0



SIGNS UP TO 12 SQ. FT.



SIGNS UP TO 28 SQ. FT.

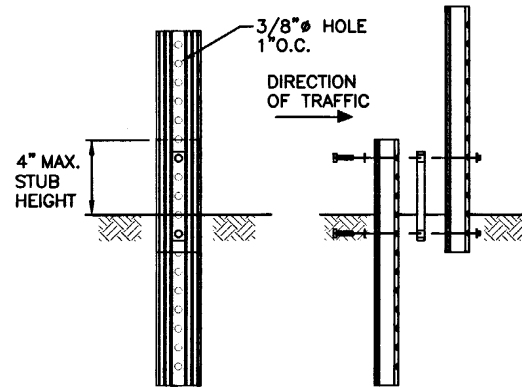


SIGNS UP TO 40 SQ. FT.



RECOMMENDED TORQUE VALUES:
BOLTS TO THREADED BAR SPACER
20 FT. LBS.
SELF-LOCKING FLANGE NUT TO BOLTS
20 FT. LBS.

TOP VIEW



FRONT VIEW

RIGHT SIDE VIEW

DETAIL "A"

INSTALLATION PROCEDURE:

1. REMOVE A SPADE FULL OF SOIL (APPROXIMATELY 2" DEEP) FROM WHERE THE BASE POST WILL BE LOCATED.
2. DRIVE THE BASE POST IN THE CENTER OF THE HOLE JUST CREATED, TO WITHIN 4" OF GRADE LEVEL.
3. PLACE ONE BOLT AND FLAT WASHER IN THE TOP HOLE OF THE BASE POST. (IF THE TOP HOLE ON THE BASE POST, OR THE BOTTOM HOLE ON THE TOP POST IS LESS THAN 3/4" FROM END OF THE POST USE THE SECOND AND SIXTH HOLES.) WITH THE THREADED BAR SPACER ALIGNED WITH TOP HOLE ON THE BACK SIDE OF THE BASE POST, SECURELY TIGHTEN THE BOLT TO 20 FT. LBS. OF TORQUE. REPEAT THIS PROCESS FOR THE LOWER BOLT.
4. NEST THE TOP POST OVER THE PROTRUDING BOLTS ON THE BASE POST. PLACE A SELF-LOCKING FLANGE NUT ON EACH BOLT AND TIGHTEN SECURELY TO 20 FT. LBS. OF TORQUE.
5. REPLACE SOIL REMOVED IN STEP 1.
6. IN TRIPLE POST INSTALLATIONS USING 4 LB./FT. POSTS IN WEAK SOIL, A 1'-0"W x 6"H SOIL PLATE IS REQUIRED.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE SILVER ANODIZED BAR SPACER IS FOR USE WITH 2, 2.5 AND 2.75 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
3. THE GOLD ANODIZED BAR SPACER IS FOR USE WITH 3 AND 4 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
4. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.
5. FOR SIGNS GREATER THAN 40 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

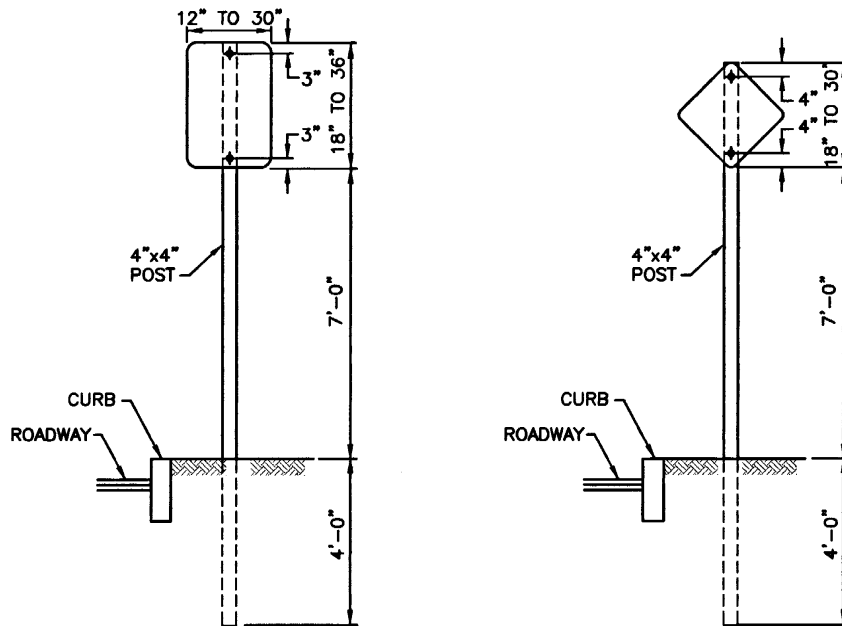
**SIGN POST SELECTION AND INSTALLATION DETAILS
U-CHANNEL POST (SIGNS UP TO 8'-0"Wx4'-0"H)**

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

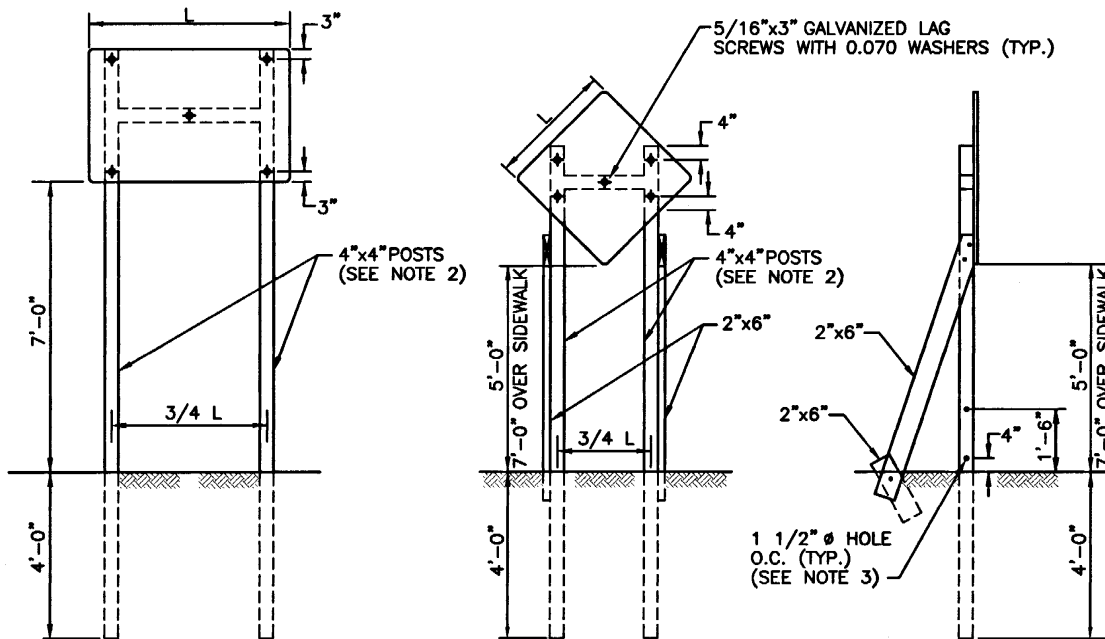
Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
24.2.0



SIGNS UP TO 10 SQ. FT.



SIGNS UP TO 60 SQ. FT.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE (2) 4"x6" POSTS FOR SIGN AREAS GREATER THAN 20 SQ. FT.
3. DRILL 1 1/2" Ø HOLES FOR 4"x6" POSTS ONLY.
4. FOR SIGNS 5'-0"x5'-0" AND LARGER USE DIAGONAL BRACING ON EACH VERTICAL POST AND 4 LAG SCREWS
5. CONSTRUCTION AND TEMPORARY SIGN PANELS SHALL BE 3/4" THICK EXTERIOR GRADE PLYWOOD OR ALUMINUM.
6. ALL SIGN SUPPORTS (INCLUDING TEMPORARY) MUST BE SUCCESSFULLY CRASH TESTED.
7. FOR SIGNS GREATER THAN 60 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION AND TEMPORARY
SIGN MOUNTINGS (SIGNS UP TO 60 SQ. FT.)**

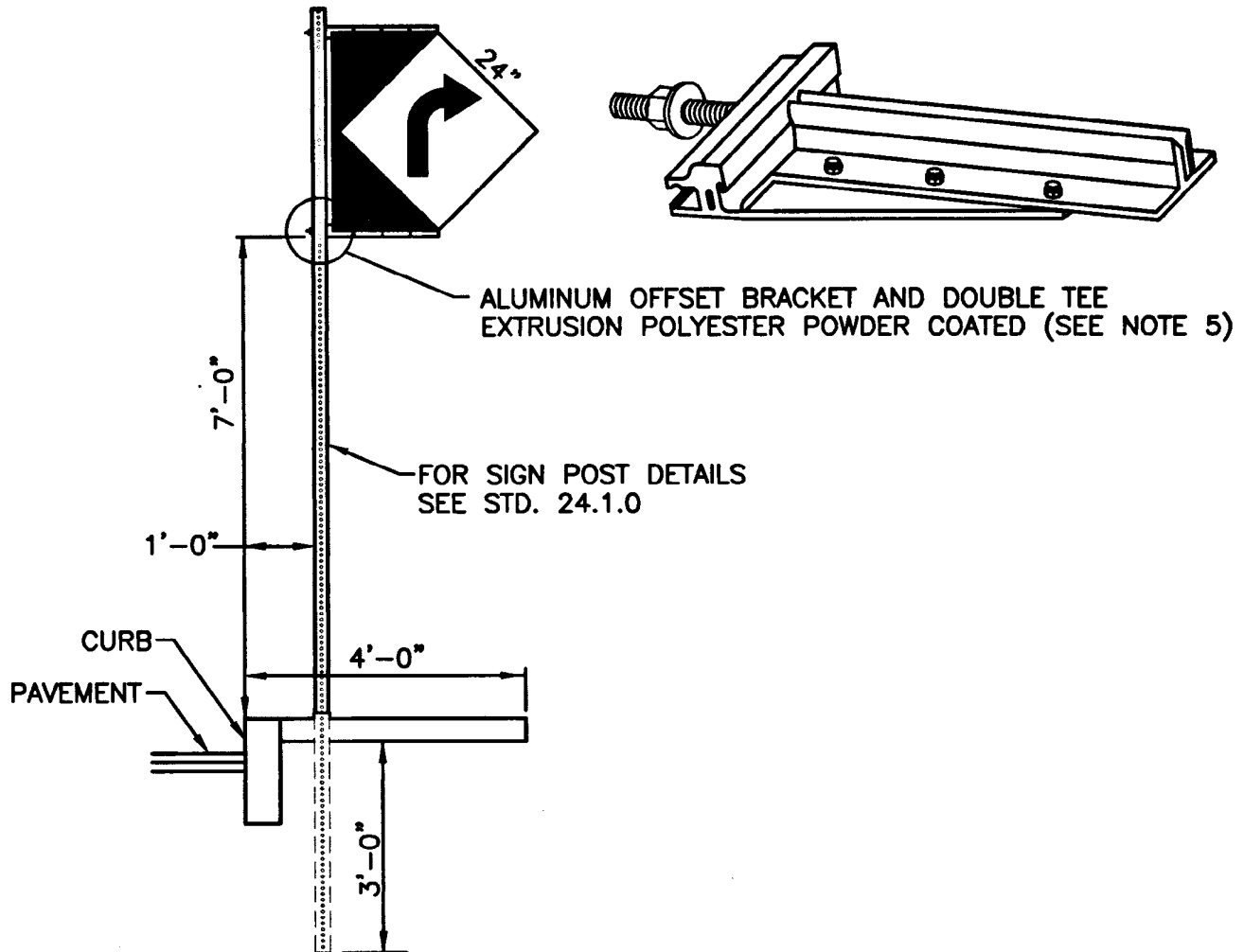
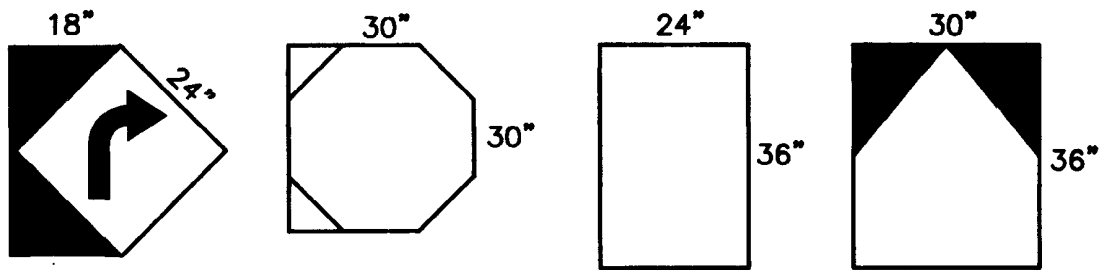
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CHIEF ENGINEER
TRANSPORTATION

Edward J. Berke
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS SIGN MOUNTING SHALL NOT REPLACE STD. 24.6.0 PARKING SIGN MOUNTING.
3. INSTALLATION SOIL, GRAVEL, OR ASPHALT CAP AND SLEDGE HAMMER. CONCRETE USE PNEUMATIC HAMMER OR CONCRETE DRILL.
4. MAXIMUM SIGN AREA 7.5 SQ. FT.
5. DOUBLE TEE EXTRUSION MAY BE ORDERED OR CUT TO EQUAL HORIZONTAL EDGE OF SIGN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

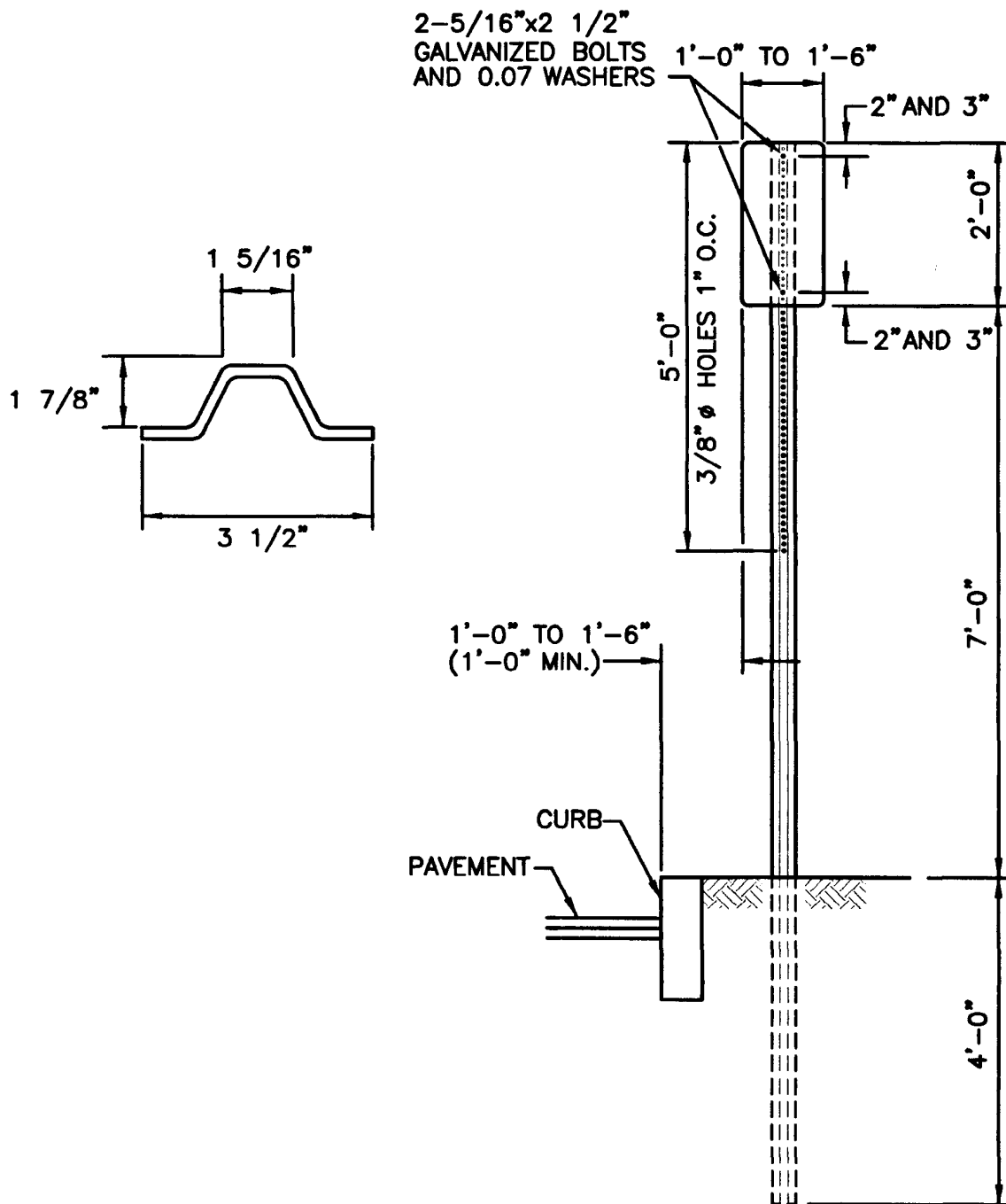
CANTILEVER BREAKAWAY SIGN SUPPORT FOR 4'-0" TO 5'-0" SIDEWALKS

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE STANDARD SPECIFICATIONS.
2. PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° WITH A LINE PARALLEL TO FLOW OF TRAFFIC, 1'-6" (1'-0" MIN.) FROM EDGE OF CURB FACE.

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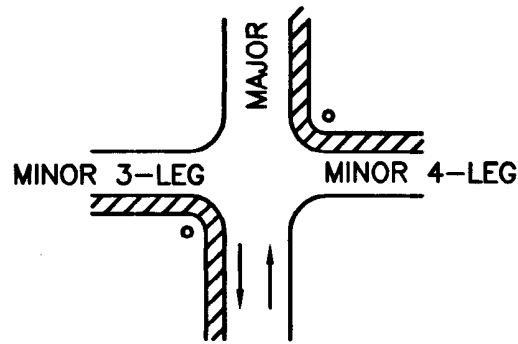
PARKING SIGN MOUNTING DETAIL

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
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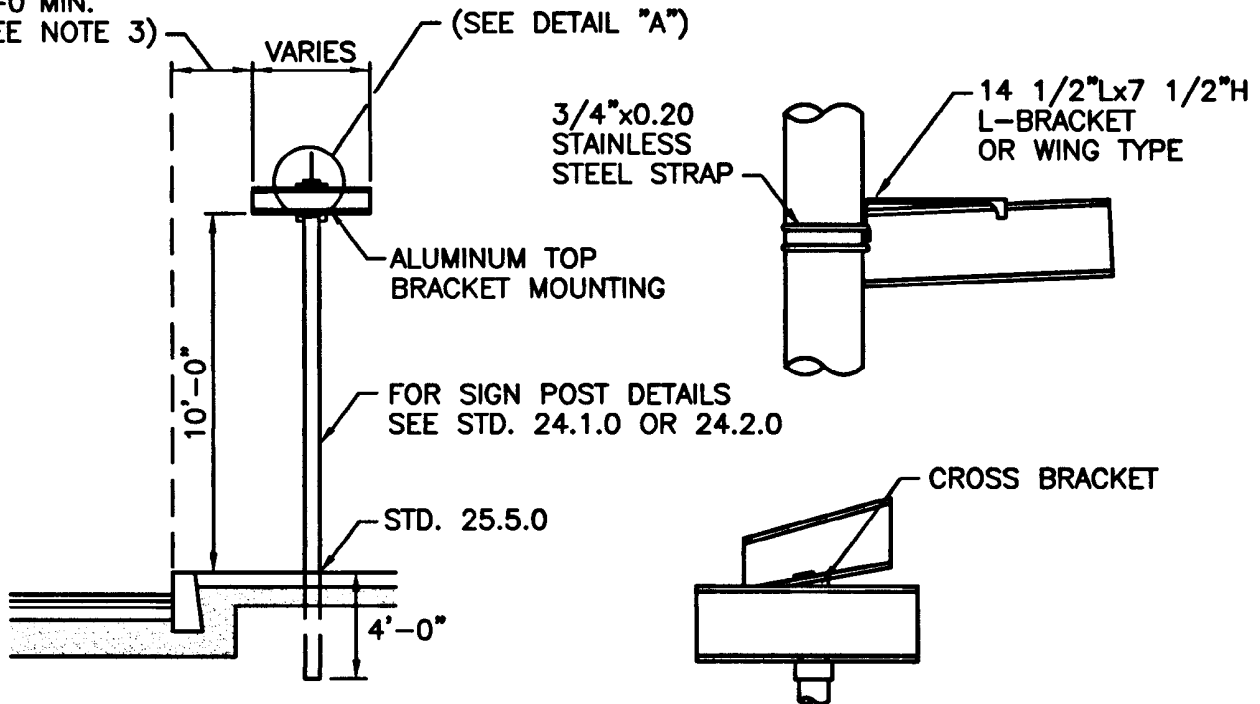




TYPICAL SIGN LOCATION

IF SIGNS ARE ON THEIR OWN SUPPORT POST, THE POST SHALL BE LOCATED NEARER TO THE MAJOR STREET AND WITHIN 5'-0" OF THE P.T. OF THE CURVE.

2'-0"+ DESIRABLE
1'-0" MIN.
(SEE NOTE 3)



POST ANCHOR

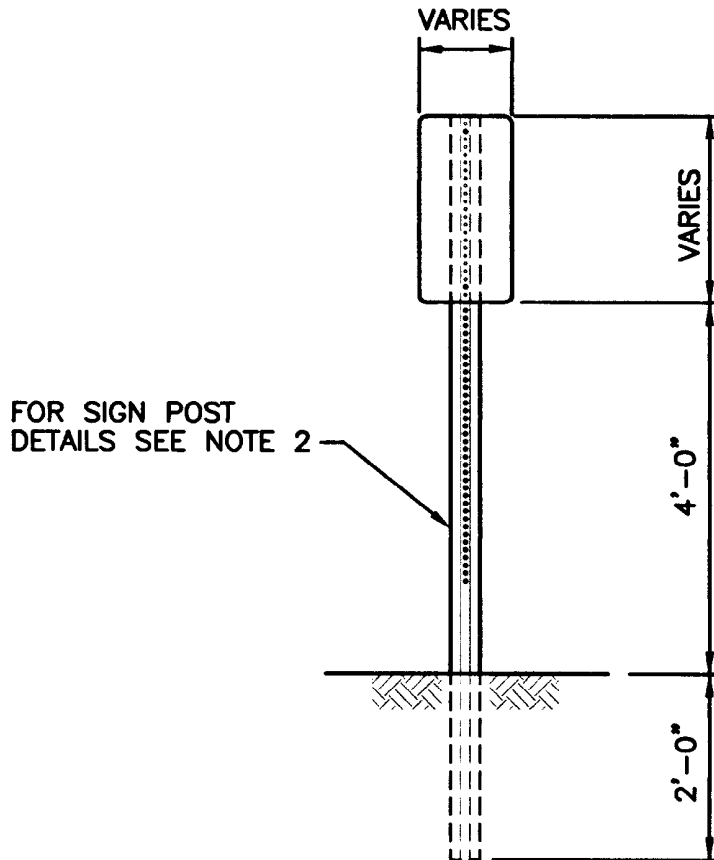
DETAIL "A"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. EACH SIGN SHALL HAVE LEGEND ON BOTH SIDES.
3. POSTS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE BACK OF SIDEWALK, UNLESS SPACE DOES NOT PERMIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			STREET SIGN MOUNTING DETAIL		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; width: 80px; margin: 0 auto;"> R.I. STANDARD 24.6.1 </div>
NO.	BY	DATE			
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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.19 OR THE R.I. STANDARD SPECIFICATIONS.
2. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0
3. POST LENGTH FOR MILE MARKER SHALL BE 8'-0" WITH 3/8" ϕ HOLES 1" O.C. FOR A LENGTH OF 2'-6" FROM TOP OF POST.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

NO.	BY	DATE

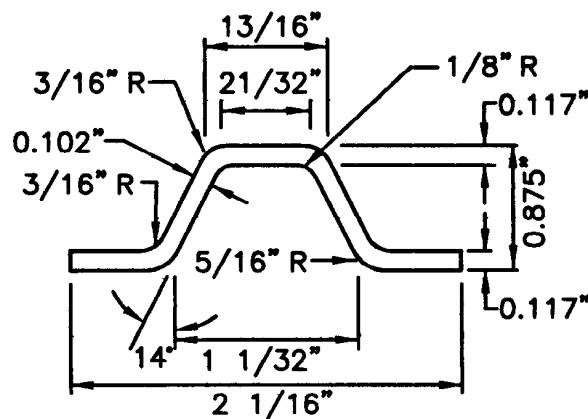
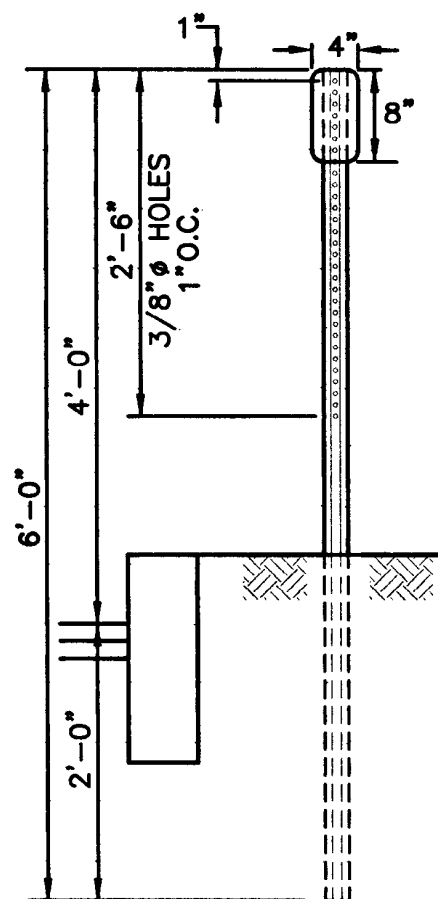
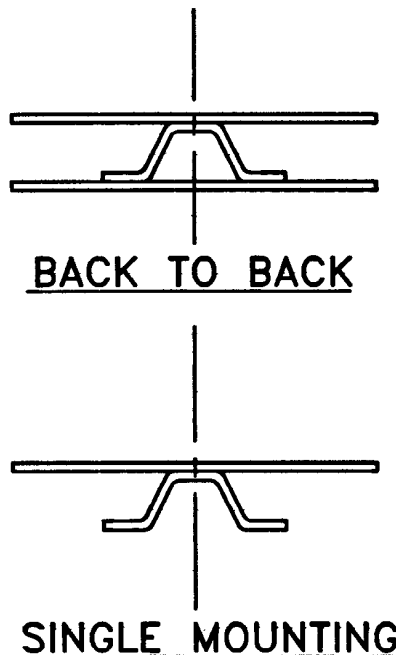
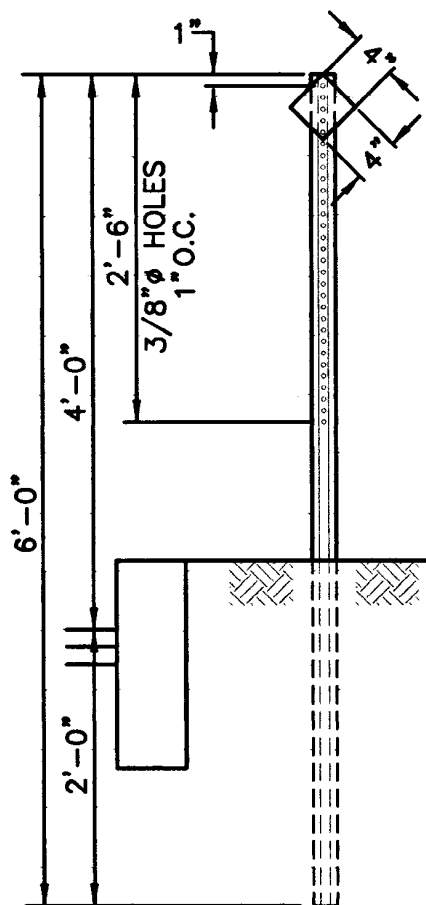
MILE MARKER MOUNTING DETAIL

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
3. MOUNT WITH 3/16" ALUMINUM DRAW RIVETS AND WASHERS OR 1/4" ALUMINUM CARRIAGE BOLTS AND WAHERS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**LIGHTWEIGHT STEEL DELINEATOR
MOUNTING DETAIL**

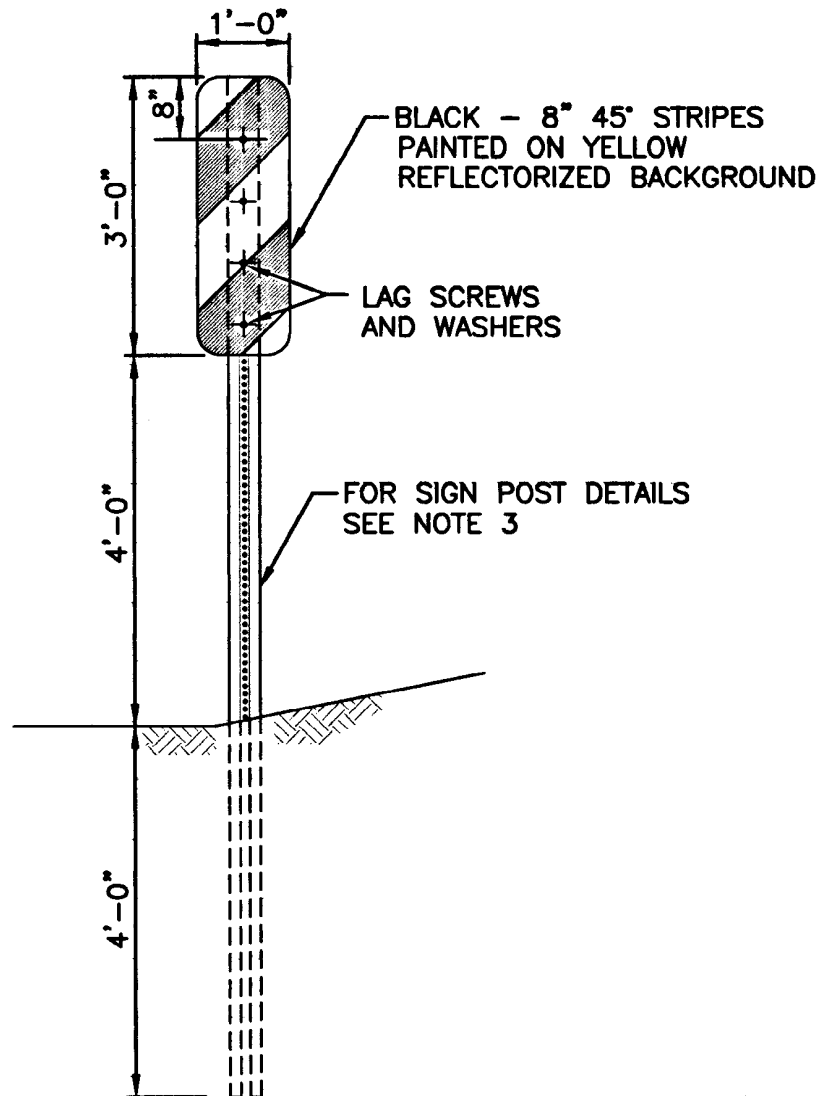
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James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
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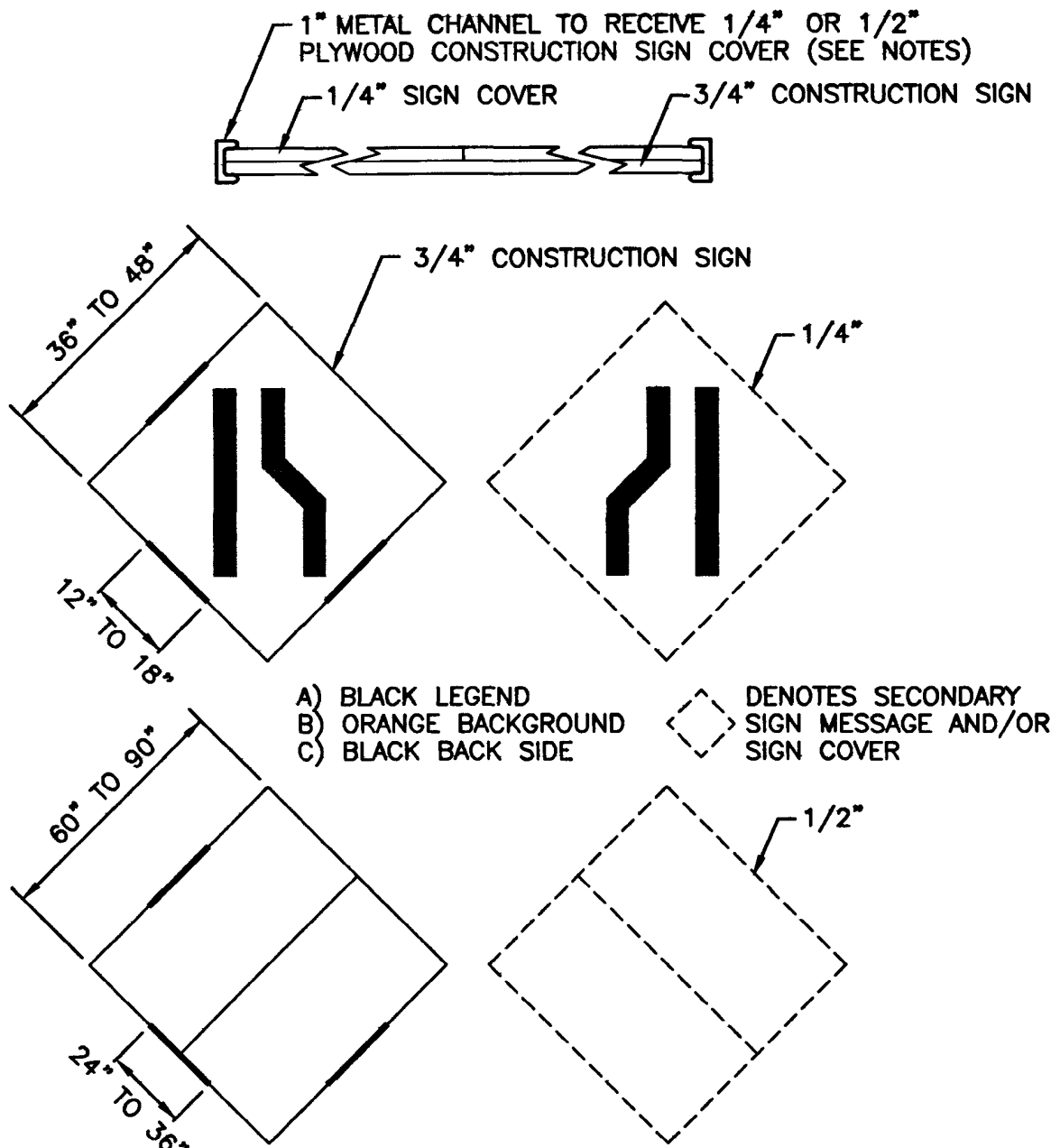


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHOWN IS FOR RIGHT BRIDGE ABUTMENT. USE OPPOSITE SIGN FOR LEFT SIDE.
3. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BRIDGE ABUTMENT MARKER MOUNTING DETAIL		
NO.	BY	DATE			
					JUNE 15, 1998 <small>ISSUE DATE</small>
			<small>CHIEF ENGINEER TRANSPORTATION</small>		
			<small>CHIEF DESIGN ENGINEER TRANSPORTATION</small>		



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 922 OR THE R.I. STANDARD SPECIFICATIONS.
2. HARD COVER - FOR DAILY COVERING OF CONSTRUCTION SIGNS AS NEEDED OR TO CHANGE SIGN MESSAGE AS NEEDED.
3. SOFT COVER - AN ALTERNATIVE TO USING A PLYWOOD SIGN COVER WILL BE A TARP COVER (NON-TRANSPARENT) WITH GROMMETS FOR THE PURPOSE OF RECEIVING A CORD OR A ROPE TO SECURE TARP COVER TO EXISTING CONSTRUCTION SIGN FACE. TARP COVER DIMENSIONS SHALL BE AT LEAST EQUAL TO THE CONSTRUCTION SIGN DIMENSIONS. THIS SOFT COVER IS SOLELY FOR THE PURPOSE OF COVERING CONSTRUCTION SIGNS, AT NO TIME SHALL SIGN MESSAGES APPEAR ON THE FACE OF THE TARP COVERS, NOR SHALL TARP COVERS BE SECURED BY TAPING OR STAPLING TO FRONT OF SIGN.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

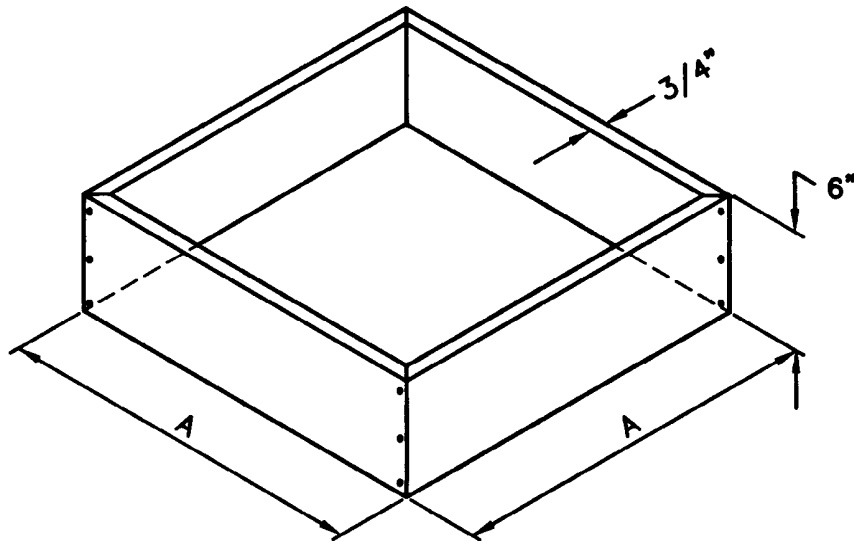
TEMPORARY CONSTRUCTION SIGN COVER DETAIL

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



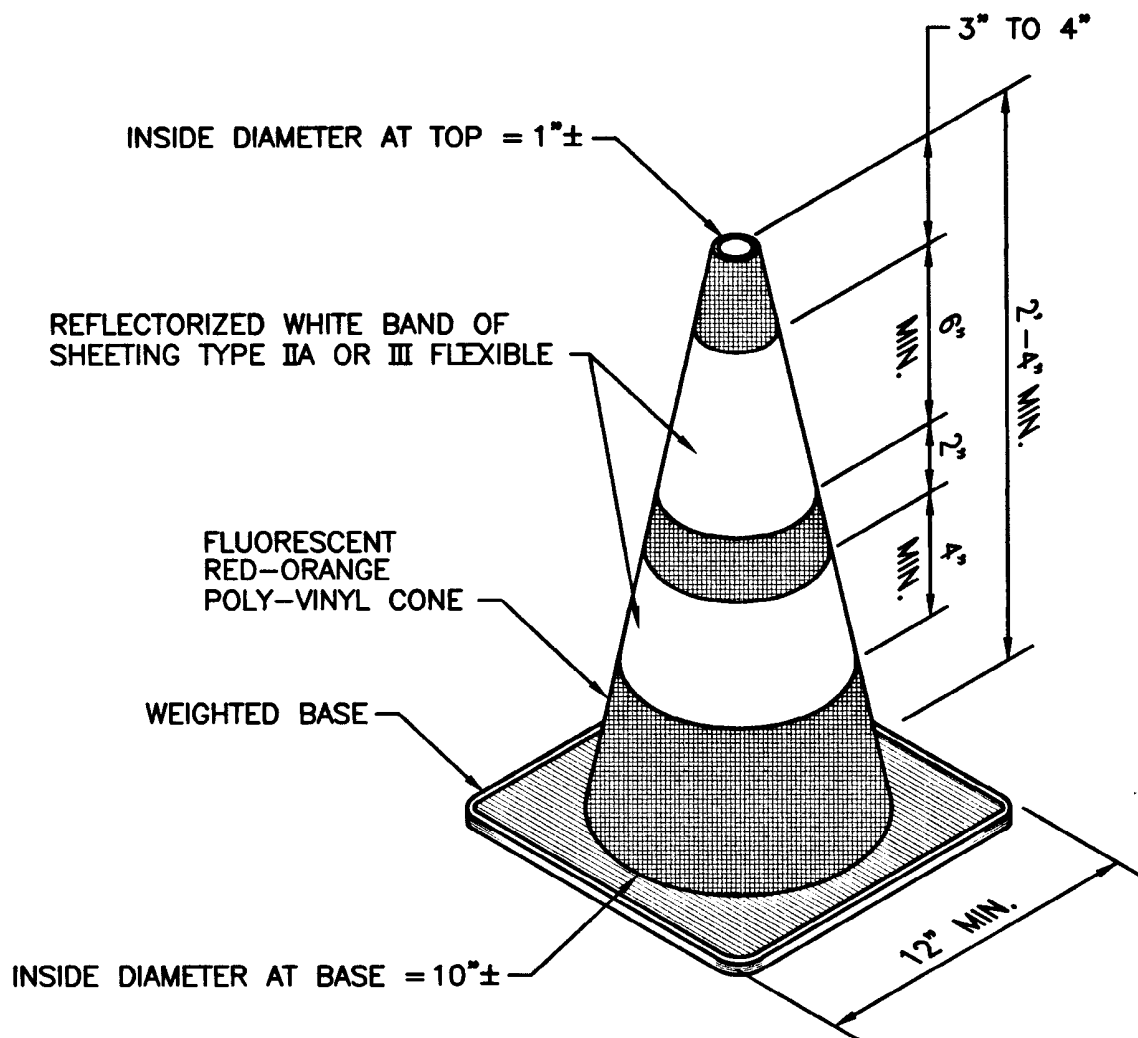


NOTES:

1. 3/4"x6" BOARDS TO BE USED FOR FORMS FOR SIGN POST MOUNTING IN CONCRETE AND ASPHALT SIDEWALK AREAS.
2. DIMENSION "A" SHALL BE 6" LARGER THAN THE GREATER DIMENSION OF THE REQUIRED POST, BUT 8" MINIMUM.
3. AFTER INSTALLATION OF THE POST AND PROPER COMPACTION, THE HOLE SHALL BE PAVED TO MATCH THE SURROUNDING SIDEWALK.
4. THE BOX FORM SHALL BE REMOVED PRIOR TO PATCHING THE SIDEWALK AREA.
5. IN CONCRETE SIDEWALK AREAS EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE NEW PATCH AND THE ADJACENT SIDEWALK AREA.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BOX FORM		<div style="border: 2px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="font-size: 0.8em; margin-bottom: 5px;">R.I. STANDARD</div> <div style="font-size: 1.5em; margin: 0;">25.2.0</div> </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: right;"> <small>JUNE 15, 1998</small> <small>ISSUE DATE</small> </div> </div>		



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. DIMENSIONS MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS.
3. IN AREAS WHERE POSTED SPEED IS 45 MPH AND OVER ADD A 7 LB. WEIGHTED RING TO EACH CONE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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NO.	BY	DATE

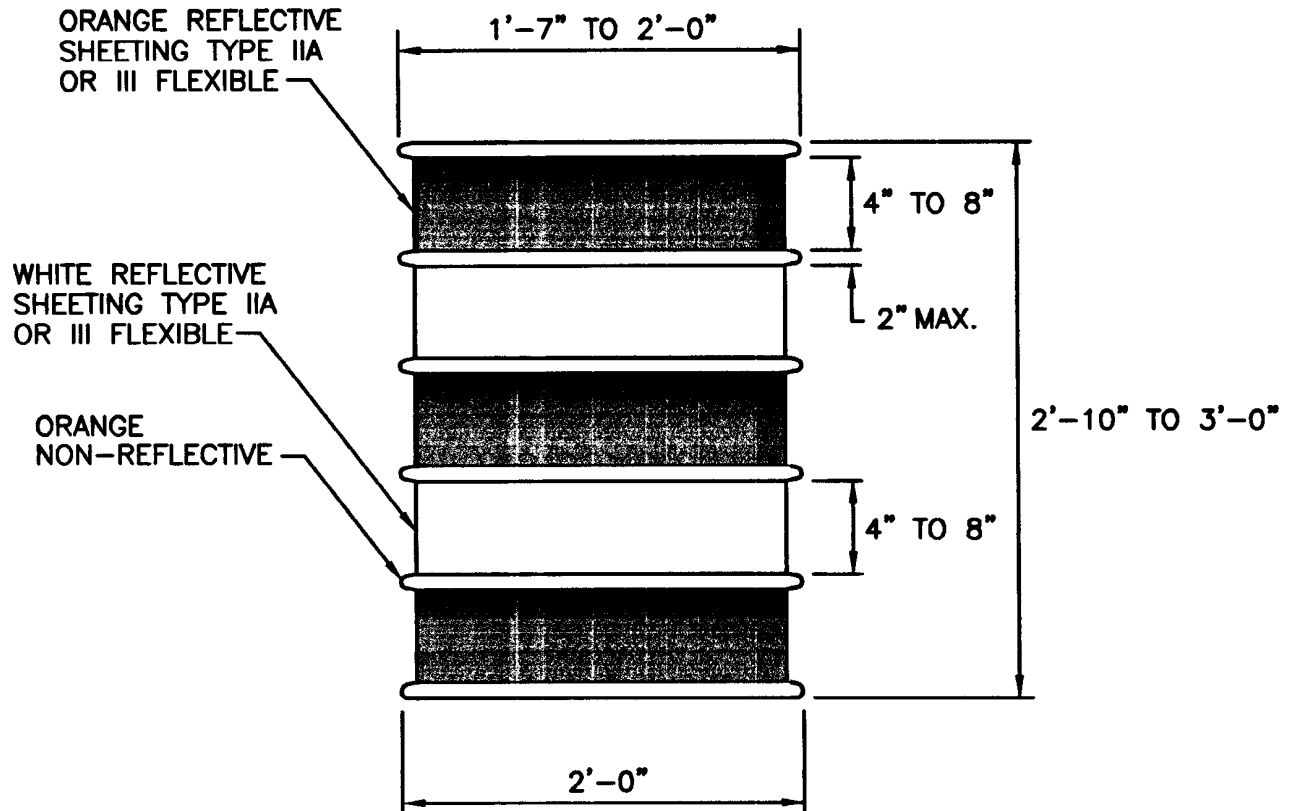
FLUORESCENT TRAFFIC CONE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. BASE TO BE ADAPTED FOR SANDBAG BALLAST.
3. DRUM CAN BE CYLINDRICAL OR PARTLY CYLINDRICAL WITH A FLAT SIDE.
4. WALL THICKNESS TO BE 1/2" MINIMUM.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

POLYETHYLENE DRUM WITH MARKINGS

James H. Casabelli
CHIEF ENGINEER
TRANSPORTATION

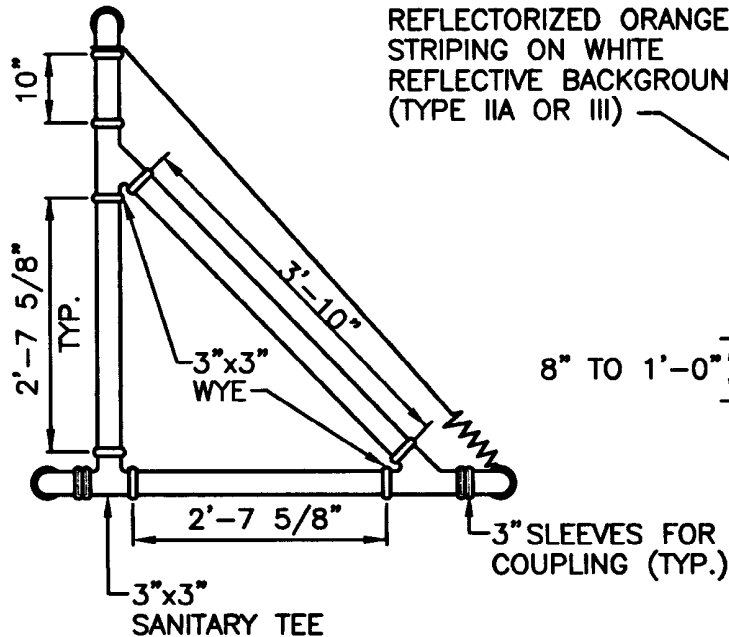
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

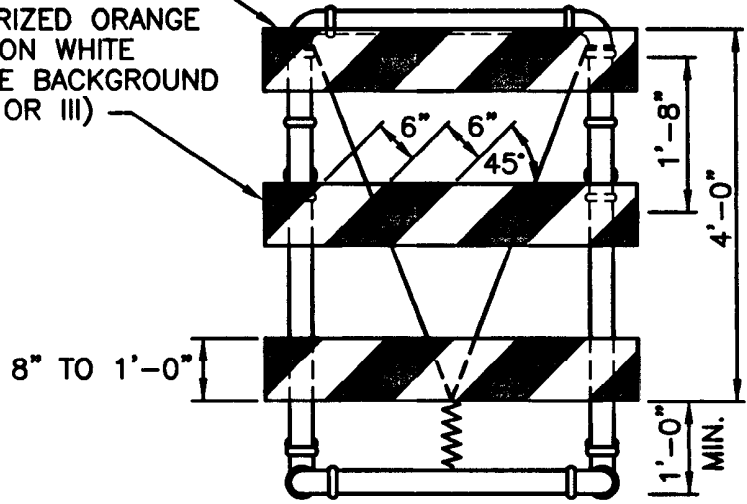


8"x48"x0.25" ANODIZED
ALUMINUM PANELS WITH
REFLECTORIZED BARRICADE
SHEETING (SEE NOTE 8)

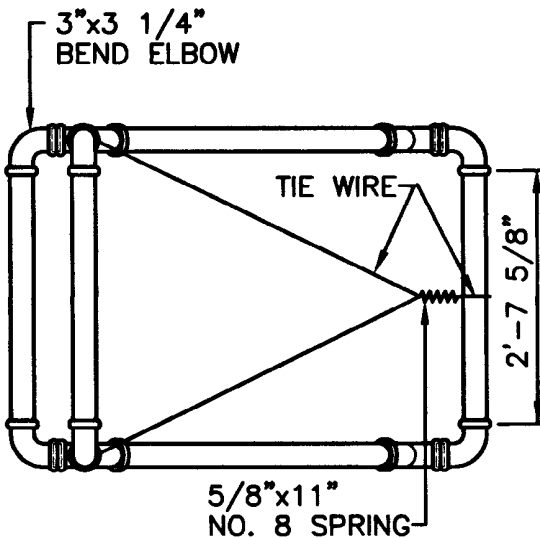
REFLECTORIZED ORANGE
STRIPING ON WHITE
REFLECTIVE BACKGROUND
(TYPE IIA OR III)



SIDE ELEVATION



FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE RATED CLASS SDR 21 OR SDR 26 CONFORMING TO ASTM D2241 OR ASTM D2729.
3. JOINT FILLINGS MAY BE PVC-ASTM D 2665 OR ACRYLONITILE BUTADIENE STYRENE (ABS) ASTM D 2661 (DRAINAGE WASTE AND VENT).
4. ALL PIPES SHALL BE WHITE. WHITE FITTINGS ARE PREFERRED, BLACK MAY BE USED.
5. ALL JOINTS SHALL BE FREE TO SEPARATE UPON VEHICLE IMPACT.
6. A FIXED FRANGIBLE PAVEMENT CONNECTION PREFERRED. SAND BAGS MAY BE SUBSTITUTED.
7. STRIPES SHALL BE SLOPED DOWNWARD IN DIRECTION OF TRAFFIC TO PASS.
8. PVC PIPE SHALL BE ULTRAVIOLET LIGHT STABILIZED.
9. ATTACH PANELS WITH 1" NO. 14 PAN HEAD METAL SCREWS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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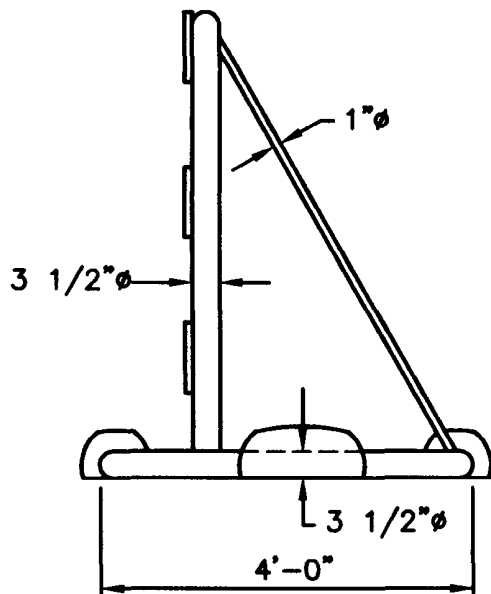
PVC PLASTIC PIPE TYPE III BARRICADE

James R. Capaldi
CHIEF ENGINEER
TRANSPORTATION

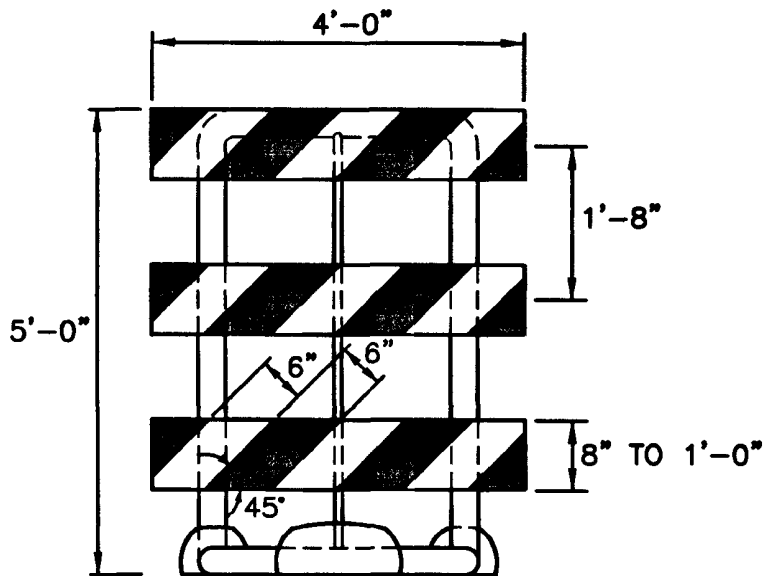
Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

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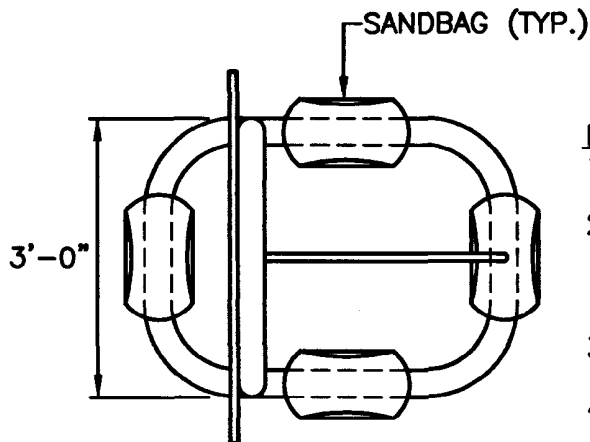




SIDE ELEVATION



FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE BASE AND UPRIGHT PIPE SHALL BE ROTATIONALLY MOLDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248, CLASS A3-E4 OR CLASS II A4.
3. THE BRACE SHALL BE EXTRUDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248-III A4.
4. ALL PIPE SHALL BE WHITE AND SHALL BE ULTRAVIOLET LIGHT STABILIZED.
5. ALTERNATE ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED, 6" WIDE, SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC TO PASS.
6. THE BARRICADE RAILS SHALL BE 9"x48"x0.125" PLASTIC PANELS ATTACHED WITH 1" PLASTIC RIVETS, 4 PER RAIL.
7. THIS IS AN APPROVED ALTERNATE TO STD. 26.3.0.
8. ALL SHEETING SHALL BE TYPE IIA OR III REFLECTIVE SHEETING.

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PLASTIC PIPE TYPE III BARRICADE






James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION






Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION






JUNE 15, 1998
ISSUE DATE













SIGN NUMBER	* R1-1	* R1-2	R2-1	R2-4a	R2-5c
LEGEND					
COLOR	BACKGROUND COPY	WHITE RED	WHITE BLACK	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	24" 30" 36" 48" 24" 30" 36" 48"	36" 48" 60" 36" 48" 60"	24" 36" 48" 24" 36" 48"	24" 36" 48" 24" 36" 48"




SIGN NUMBER	R3-1	R3-2	R3-3	R3-4	R3-5
LEGEND					
COLOR	BACKGROUND COPY	WHITE RED (BLACK ARROW)	WHITE BLACK	WHITE RED (BLACK ARROW)	YELLOW BLACK
SIGN DIMENSION	WIDTH HEIGHT	24" 24"	24" 24"	24" 24"	30" 36"

SIGN NUMBER	R3-6	R3-7 (R OR L)	R4-1	R4-2	R4-3
LEGEND					
COLOR	BACKGROUND COPY	WHITE BLACK	WHITE BLACK	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	30" 36"	18" 24" 24" 30"	18" 24" 24" 30"	24" 36" 48" 30" 48" 60"

SIGN NUMBER	R4-5	R4-6	* R4-7	R4-7a	R4-7b
LEGEND					
COLOR	BACKGROUND COPY	WHITE BLACK	WHITE BLACK	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	24" 36" 48" 30" 48" 60"	24" 30"	18" 24" 36" 48" 24" 30" 48" 60"	18" 24" 36" 48" 24" 30" 48" 60"

SIGN NUMBER	* R5-1	* R5-1a	R5-6	R5-10b	R6-1 (R OR L)
LEGEND					
COLOR	BACKGROUND COPY	RED WHITE	WHITE RED (BLACK BICYCLE)	WHITE BLACK	BLACK-ARROW WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	30" 36" 48" 30" 36" 48"	36" 24"	30" 18"	36" 12"

SIGN NUMBER	R7-1	R7-2	R7-3	R7-4	R7-5
LEGEND					
COLOR	BACKGROUND COPY	WHITE RED	WHITE RED	WHITE RED	WHITE GREEN
SIGN DIMENSION	WIDTH HEIGHT	12" 18"	12" 18"	12" 18"	12" 18"

SIGN NUMBER	R8-7	R11-1	R11-2
LEGEND			
COLOR	BACKGROUND COPY	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	30" 48" 24" 36" 48" 60"	48" 30"

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 1.15 OF THE R.I. STANDARD SPECIFICATIONS.
 2. * DENOTES TYPE VI GRADE SHEETING.
 3. REGULATORY SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.6.0.
 4. THICKNESS OF ALUMINUM SIGN PLATES:
LESS THAN 10 SQ. FT. - 0.081 IN.
10 SQ. FT. TO 36 SQ. FT. - 0.102 IN.
GREATER THAN 36 SQ. FT. - 0.125 IN.
 5. FOR ADDITIONAL SIGNS SEE THE MUTCD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS	NO.	BY	DATE

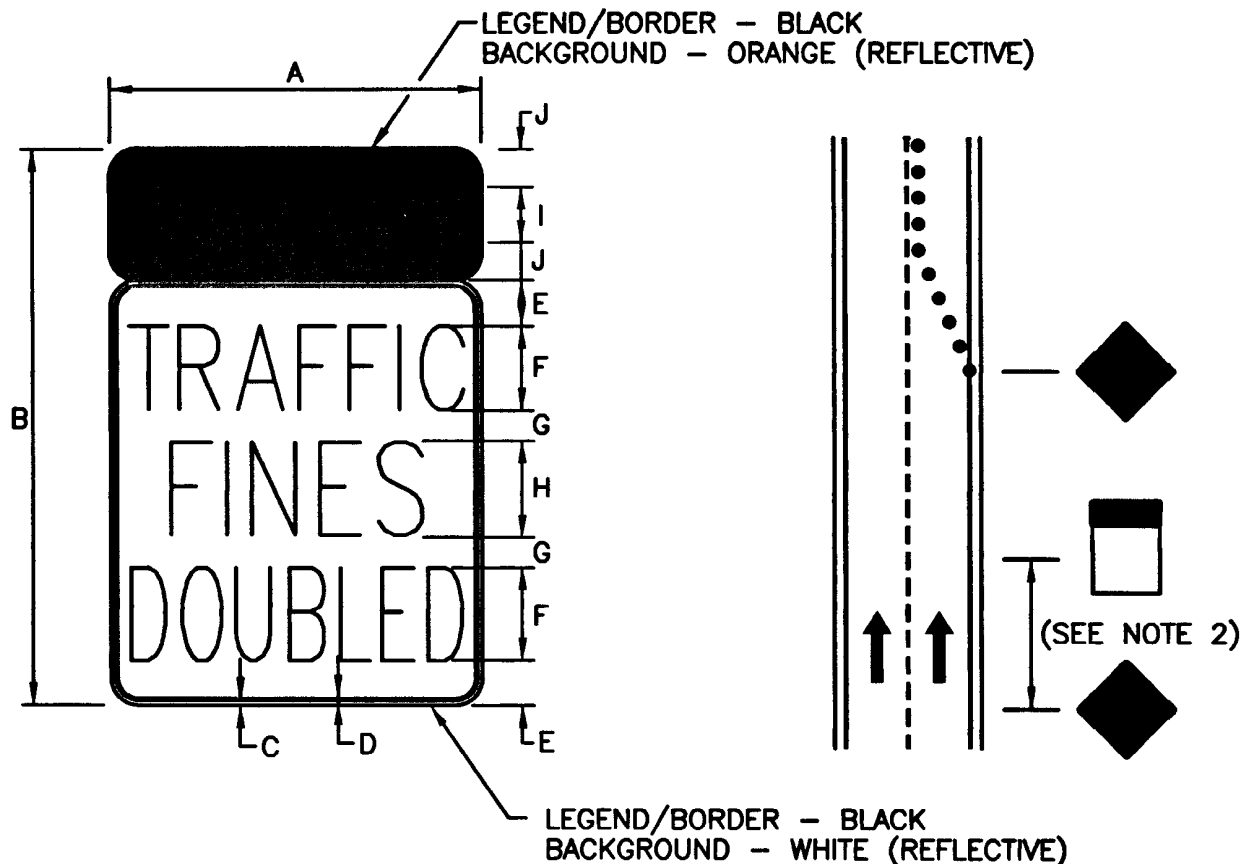
REGULATORY SIGNS

James A. Capelli
CHIEF ENGINEER
TRANSPORTATION

Sharon D. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
27.1.0






SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STANDARD	24	36	3/8	5/8	3 1/2	6B	2 1/2	6C	4C	2
RURAL	36	54	5/8	7/8	5	8B	4	8C	6C	3
EXPRESSWAY	48	72	3/4	1 1/4	7	10B	5	10C	8C	5

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. STANDARD: > 50'-0" < 200'-0"
RURAL: > 200'-0" < 400'-0"
EXPRESSWAY: > 400'-0" < 800'-0"
3. WHEN INSTALLING ON JERSEY BARRIERS LESS THAN 48" WIDE, A 36"x54" SIGN DIMENSION MAY BE USED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TRAFFIC FINES IN WORK ZONE REGULATORY SIGN		
NO.	BY	DATE			
			 		R.I. STANDARD 27.1.1
			JUNE 15, 1998 ISSUE DATE		

NO.	BY	DATE





REVISIONS





RHODE ISLAND DEPARTMENT OF TRANSPORTATION


CONSTRUCTION SIGNS

CHIEF ENGINEER
TRANSPORTATION
JUNE 15, 1998
ISSUE DATE



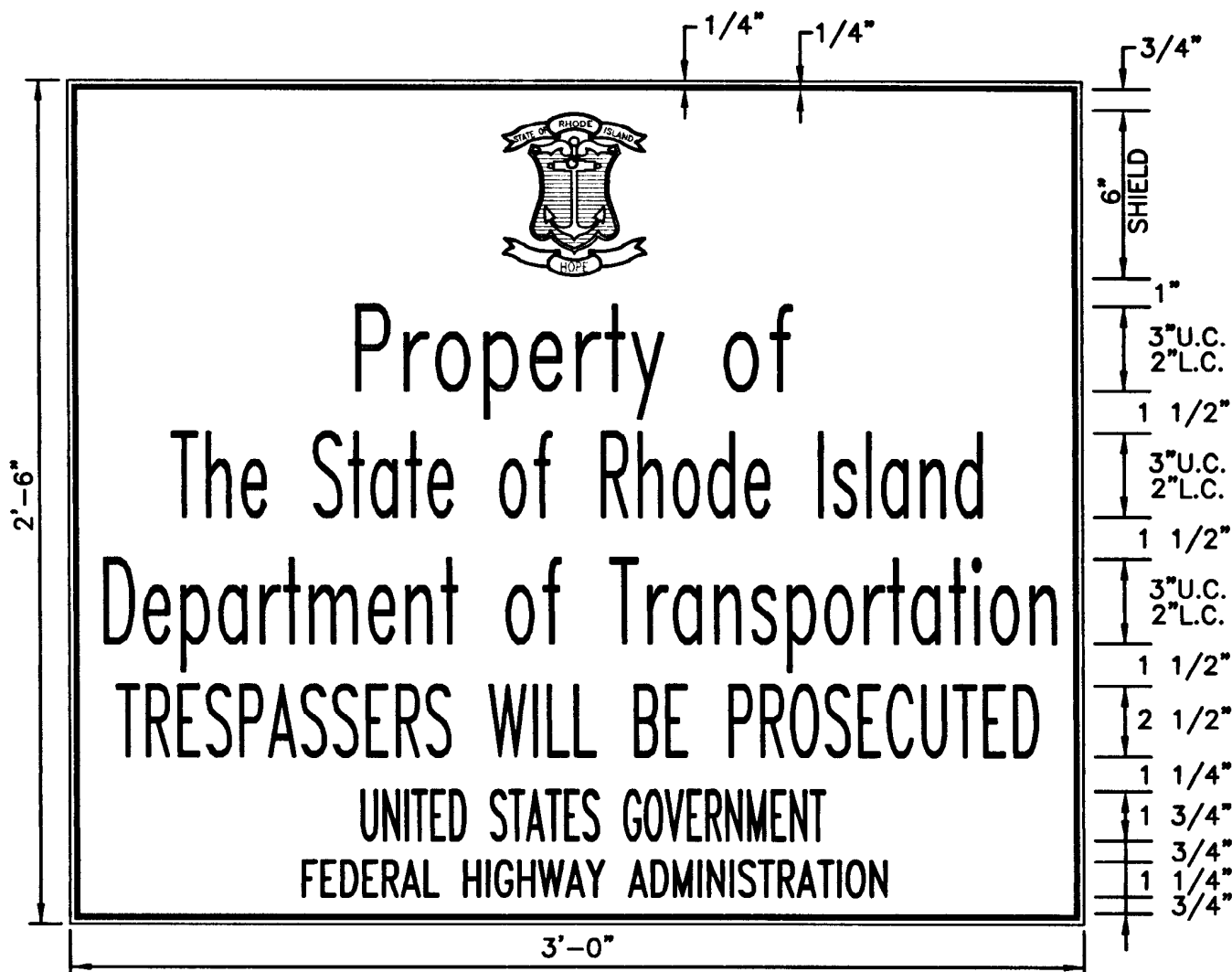
SIGN NUMBER	* W21-4	W20-2	W20-3	W20-4
LEGEND	 (SEE NOTE 2)	 (SEE NOTE 2)	 (SEE NOTE 2)	 (SEE NOTE 2)
COLOR	BACKGROUND ORANGE COPY BLACK	BACKGROUND ORANGE COPY BLACK	BACKGROUND ORANGE COPY BLACK	BACKGROUND ORANGE COPY BLACK
DIMENSION	WIDTH 30" 36" 48" 96" HEIGHT 30" 36" 48" 96"	WIDTH 30" 36" 48" 96" HEIGHT 30" 36" 48" 96"	WIDTH 30" 36" 48" 96" HEIGHT 30" 36" 48" 96"	WIDTH 30" 36" 48" 96" HEIGHT 30" 36" 48" 96"

SIGN NUMBER	W20-5 (R OR L)	W20-7	W20-7a	* G20-1
LEGEND	 (SEE NOTE 2)	 (SEE NOTE 2)		
COLOR	BACKGROUND ORANGE COPY BLACK	BACKGROUND ORANGE COPY BLACK	BACKGROUND ORANGE COPY BLACK	BACKGROUND ORANGE COPY BLACK
DIMENSION	WIDTH 30" 36" 48" 96" HEIGHT 30" 36" 48" 96"	WIDTH 30" 36" 48" 96" HEIGHT 30" 36" 48" 96"	WIDTH 30" 36" 48" 96" HEIGHT 30" 36" 48" 96"	WIDTH 60" HEIGHT 24"

SIGN NUMBER	* G20-2A
LEGEND	
COLOR	BACKGROUND ORANGE COPY BLACK
DIMENSION	WIDTH 48" HEIGHT 24"

NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
- LEGEND ON W20-SERIES SHALL INDICATE DISTANCE AS FOLLOWS: 1500 FT 1/2 MILE
1000 FT 1 MILE
500 FT AHEAD
- EXAMPLE: W20-2a = DETOUR 1500 FT
- * DENOTES TYPE V GRADE SHEETING.
- CONSTRUCTION SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.3.0.
- FOR ADDITIONAL SIGNS SEE THE MUTCD.

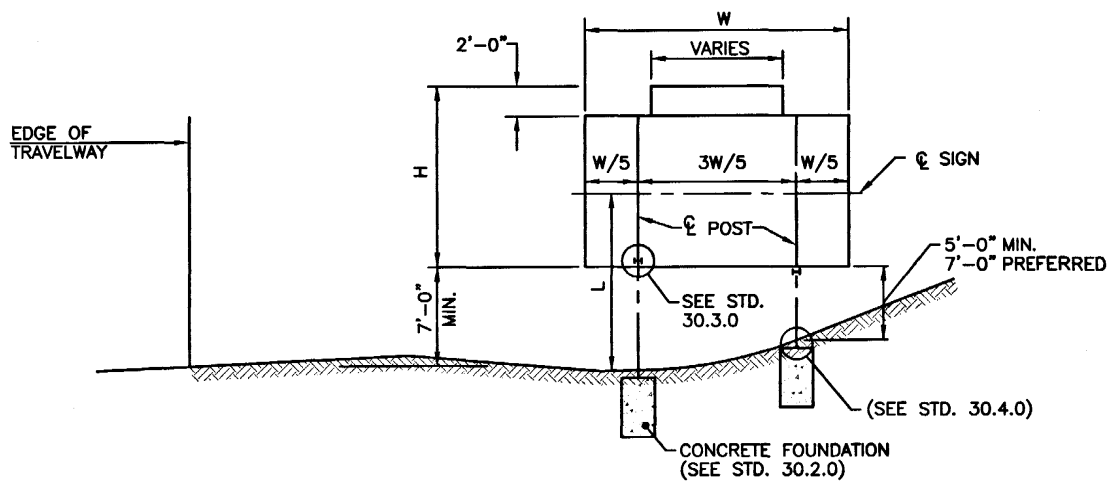


NOTES:

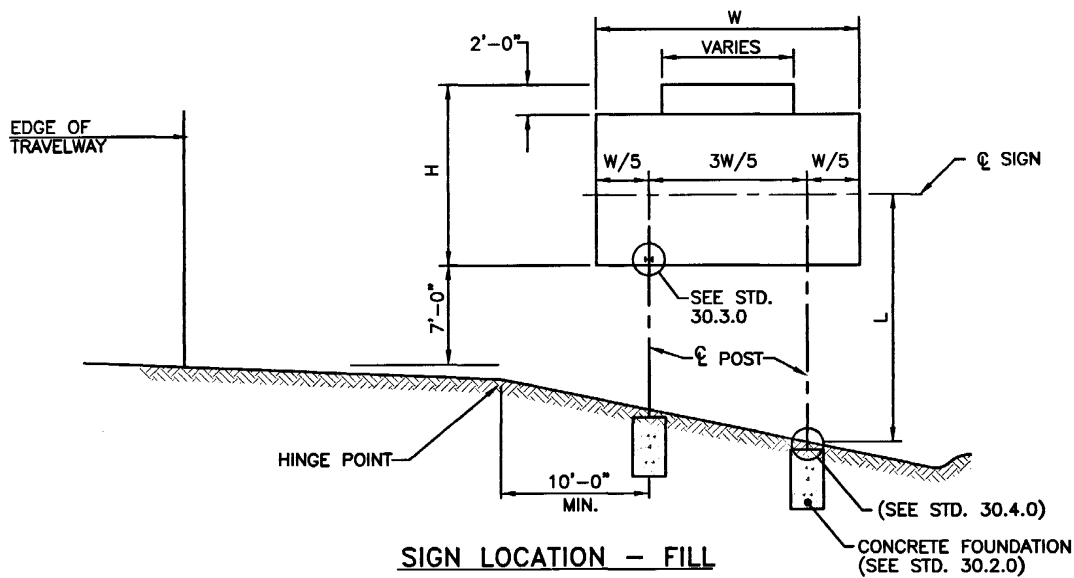
1. SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHALL BE 3/4" EXTERIOR MARINE PLYWOOD OR ALUMINUM (THICKNESS = 0.081").
3. SIGN SHALL HAVE A WHITE REFLECTORIZED BACKGROUND WITH A BLUE LEGEND AND LIGHT BLUE STATE SEAL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			FIELD OFFICE IDENTIFICATION SIGN		
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE



SIGN LOCATION - CUT



SIGN LOCATION - FILL

DETERMINE REQUIRED VALUES OF: W = MAXIMUM WIDTH OF SIGN
H = MAXIMUM HEIGHT OF SIGN
L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND CENTER LINE OF SIGN

ENTER THE POST SELECTION TABLE WITH MAXIMUM VALUE OF "L" AND
REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF POST SIGN.
FOR SIGN SIZES BETWEEN THOSE VALUES OF "W", "H" AND "L"
IN THE TABLE, USE NEXT HIGHER FOOT VALUE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SIGN LOCATION DETAILS
(SIGNS 6'-0"Wx4'-0"H AND GREATER)**

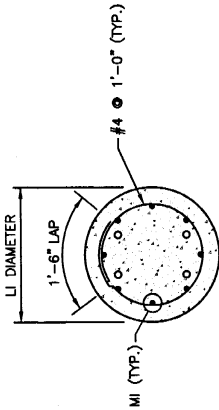
REVISIONS		
NO.	BY	DATE

James A. Capelli
CHIEF ENGINEER
TRANSPORTATION

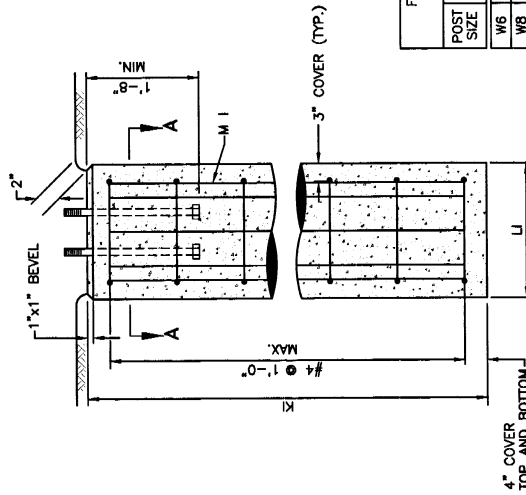
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





SECTION A-A



SECTION

FOUNDATION SELECTION TABLE FOR BREAK-SAFE SIGNS			
POST SIZE	DIAMETER (L1)	DEPTH FEET (K1)	REINFORCING STEEL (M1)
W6	2.0	5.50	8-#5
W8	2.5	6.00	8-#5
W10	3.0	6.75	8-#6
W12	3.0	7.50	8-#7
W14	3.0	8.00	8-#7

- NOTES:
- CONTRACTOR SHALL DEVELOP DRAWINGS FOR THE FOUNDATION AND STRUCTURAL SUPPORTS BASED ON THE DATA PROVIDED.
 - FOUNDATION HOLES EXCEPT IN LEDGE, SHALL BE EXCAVATED BY THE AUGER METHOD TO THE NEAT LINES OF THE OUTSIDE DIMENSIONS OF THE FOOTINGS WITHOUT DISTURBING THE SOIL AROUND OR BELOW THE PROPOSED FOOTING.
 - IN AREAS WHERE ROCK OR LEDGE IS ENCOUNTERED, THE BOTTOM OF THE FOOTING SHALL BE PLACED TO THE DESIGN DEPTH SHOWN ON THIS SHEET. THE CONCRETE SHALL FILL THE ENTIRE VOLUME OF THE EXCAVATION TO THE FULL DEPTH OF THE FOOTING.
 - WHERE THE FOUNDATION REQUIRES A SPREAD FOOTING, IT MAY BE PLACED SEPARATELY AND THE PEDESTAL THEN BROUGHT TO GRADE. THE FOOTINGS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER AT THE COST OF THE DESIGN AND CONSTRUCTION OF THE SPREAD FOOTINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - ANCHOR BOLTS, IF REQUIRED, SHALL BE PROVIDED BY THE ENGINEER. SHALL BE GRAVEL BORROW CONFORMING TO THE REQUIREMENTS OF THE R.I. STANDARD SPECIFICATIONS EXCEPT THAT NO STONE LARGER THAN 1 1/2" SHALL BE ALLOWED.
 - WHERE FOOTINGS ARE PLACED AGAINST EMBANKMENTS THE TOP 6" BELOW FINISHED GRADE SHALL BE FORMED.
 - ANCHOR BOLTS SHALL BE SET TO CONFORM WITH THE BASE-PLATE TEMPLATE AS FURNISHED IN CONFORMANCE WITH THE STANDARD PLANS.
 - THE TOP OF THE FOUNDATIONS SHALL BE PROPERLY FINISHED AND DRESSED TO ASSURE THAT FULL BEARING WILL BE PROVIDED ON THE LEVELING NUTS WHICH ARE TO BE SET IN CONCRETE. ALL EXPOSED EDGES SHALL HAVE A 1/2" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

FOUNDATION DETAILS
(SIGNS 6'-0"Wx4'-0"H AND GREATER)

REVISIONS

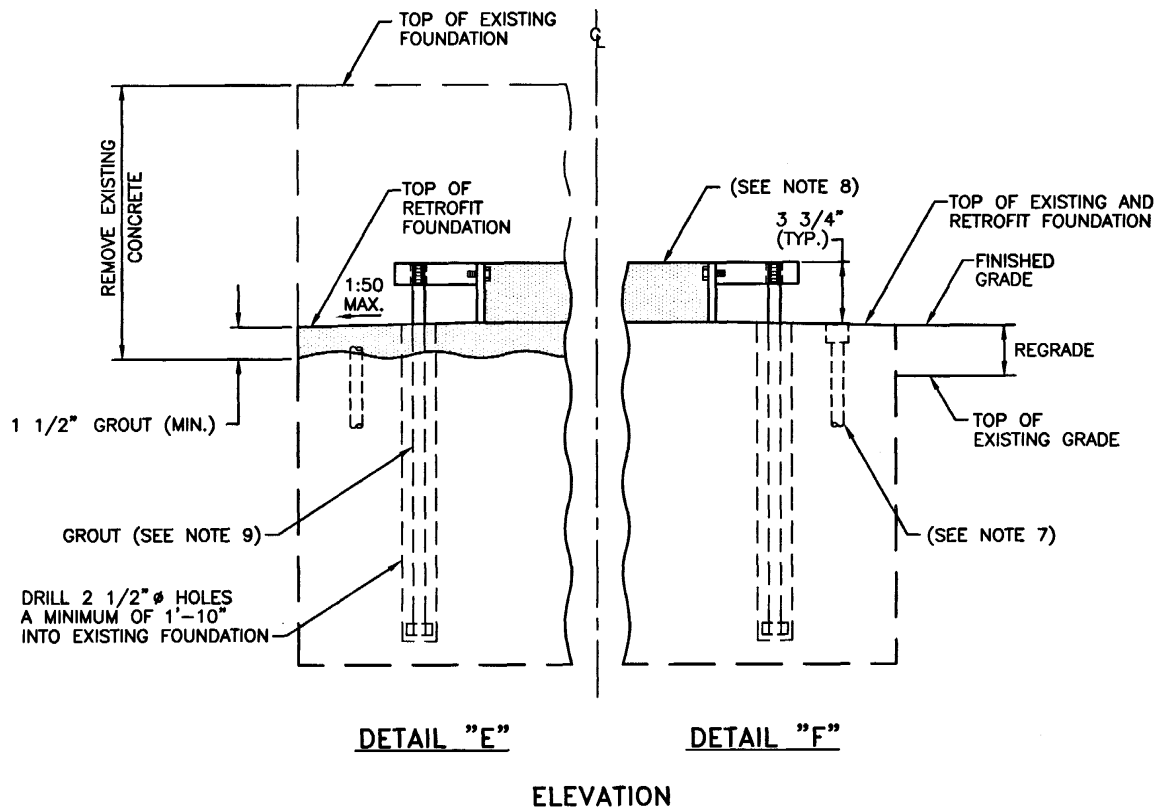
NO. BY DATE

James L. Gault
DESIGNER

James L. Gault
DESIGNER

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
30.2.0

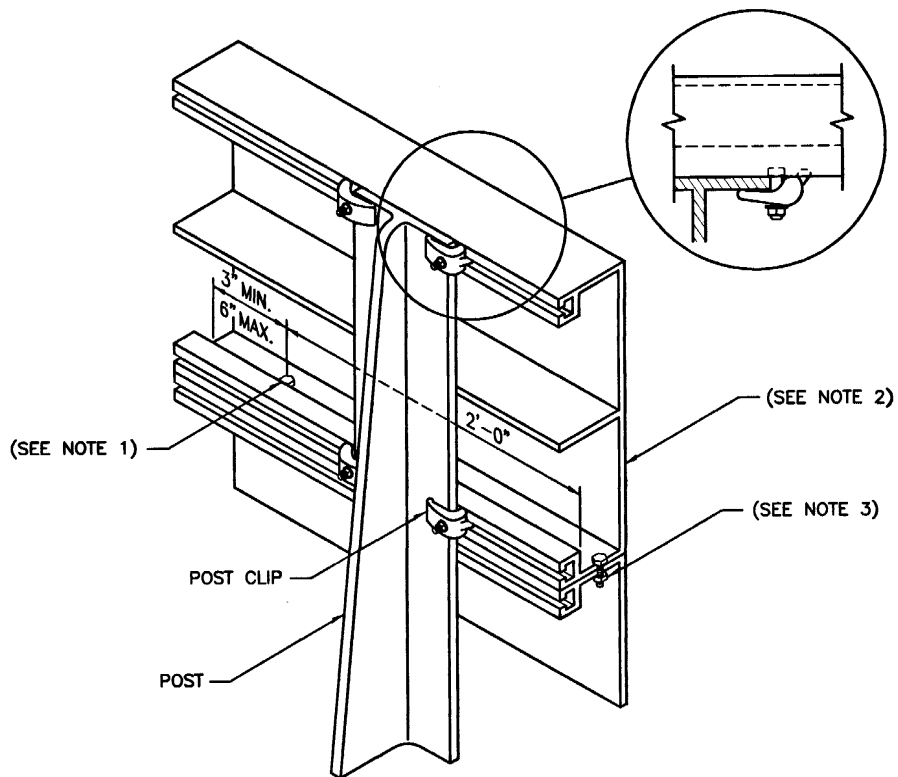


NOTES:

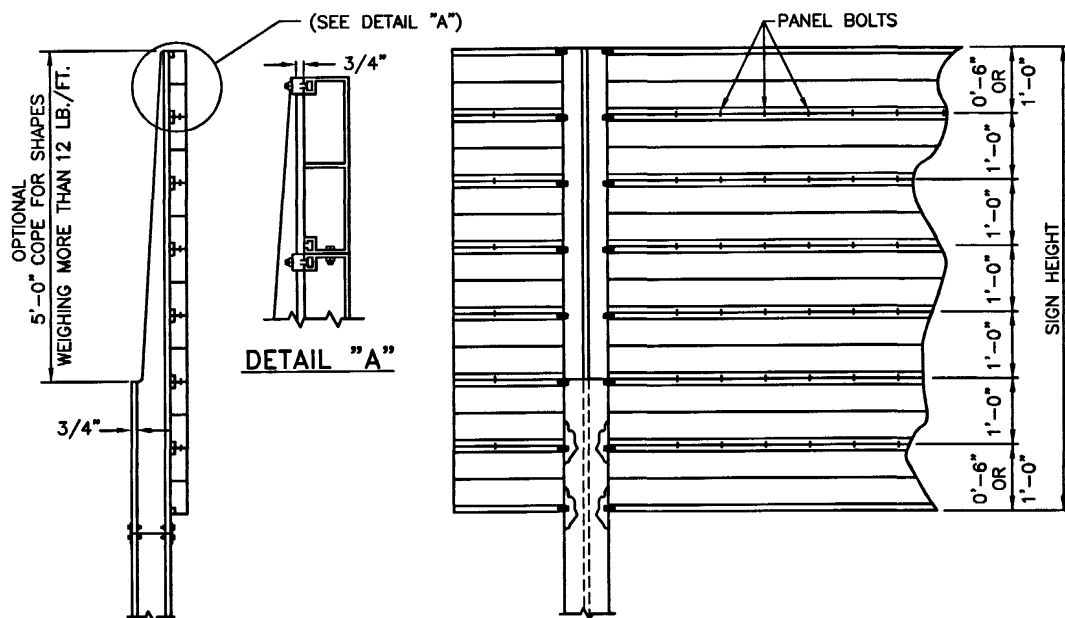
1. FOR CONCRETE CLASS, SEE SECTION 601.01.1, TABLE 1 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN EXISTING POST IS ATTACHED TO FOUNDATION BY ANCHOR BOLTS, REMOVE EXISTING ANCHOR BOLTS A MINIMUM OF 1" BELOW TOP OF NEW FOUNDATION. A 3 3/4" DEEP SECTION OF POST SHALL BE USED TO ATTACH THE ANCHOR PLATES. ANY UNCOATED PORTION OF THE SECTION SHALL BE PAINTED WITH AN APPROVED ZINC RICH PAINT.
3. WHEN EXISTING POST IS EMBEDDED IN A FOUNDATION, REMOVE POST APPROXIMATELY 3 3/4" ABOVE TOP OF NEW FOUNDATION, INSTALL ANCHOR PLATES AND PAINT TOP OF POST WITH AN APPROVED ZINC RICH PAINT.
4. AFTER CORRECTLY POSITIONING ANCHOR BOLTS AND ANCHOR PLATES, FILL HOLES WITH NON-SHRINK GROUT.
5. PAINT ANY EXPOSED EXISTING REINFORCING BARS WITH A ZINC RICH PAINT BEFORE APPLYING GROUT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			FOUNDATION MODIFICATION FOR RETROFIT (SIGNS 6'-0"Wx4'-0"H AND GREATER)	<div><div>R.I. STANDARD 30.2.1</div></div>
NO.	BY	DATE		
			<div><div>John A. Casella</div><div>CHIEF ENGINEER TRANSPORTATION</div></div>	
			<div><div>Edmund Parker Jr</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div>	
				<div>JUNE 15, 1998 ISSUE DATE</div>



ISOMETRIC SHOWING SIGN COMPONENTS



REAR ELEVATION

SHOWING ARRANGEMENT OF POST CLIPS (BOTH POSTS OR ALL POSTS) AND PANEL BOLTS

NOTES:

1. PANEL HEX BOLT AND WASHER ASTM-B211 ALUMINUM ALLOY 2024-T4 3/4"-16x3/4" LONG.
2. ALUMINUM SIGN PANEL (TYPE B) ALUMINUM ALLOY 6063-T6 ASTM-B221 THICKNESS 0.125".
3. PANEL HEX NUT, ALUMINUM ALLOY 6062-T9 3/8"-16 HEX. HD. NUT ASTM-B211.
4. ALL EXTRUDED ALUMINUM PANELS SHALL HAVE SIDE MOULDINGS.
5. PANEL BOLTS TO BE PLACED SYMMETRICALLY ABOUT C OF SIGN PANEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SIGN PANEL DETAILS
(SIGNS 6'-0"Wx4'-0"H AND GREATER)**

REVISIONS		
NO.	BY	DATE

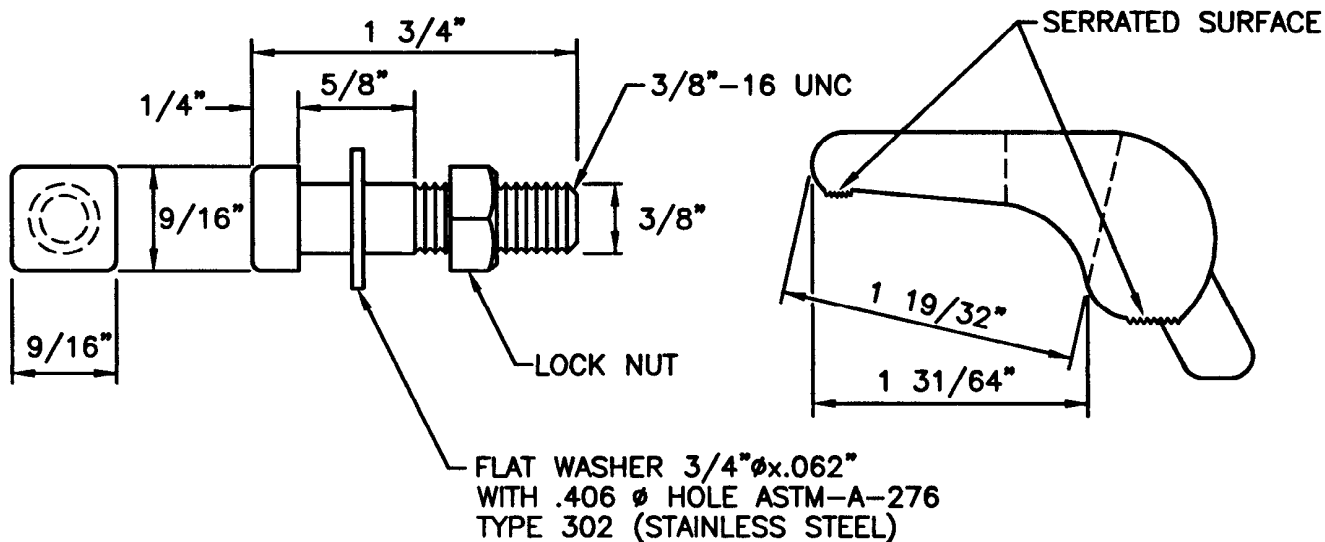
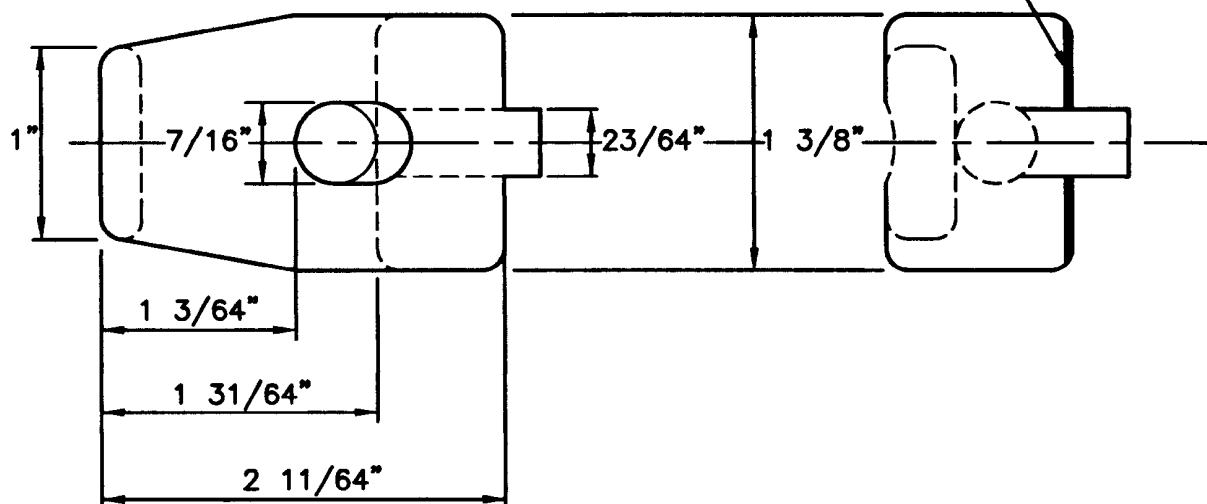
James R. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



ALUMINUM SHALL HAVE ONE COAT OF
BITUMINOUS PAINT PER AASHTO SPECIFICATIONS



NOTES:

1. BOLT SHALL BE STAINLESS STEEL ALLOY 304 ASTM-A-193-GRADE B8 OR ASTM-A-194-GRADE 8.
2. NUT SHALL BE STAINLESS STEEL ALLOY 303 ASTM-A-193-GRADE B 8F OR OR ASTM-A-194-GRADE 8F.
3. CLIP SHALL BE ALUMINUM ALLOY 356-T6 (SG70A) ASTM-B26.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

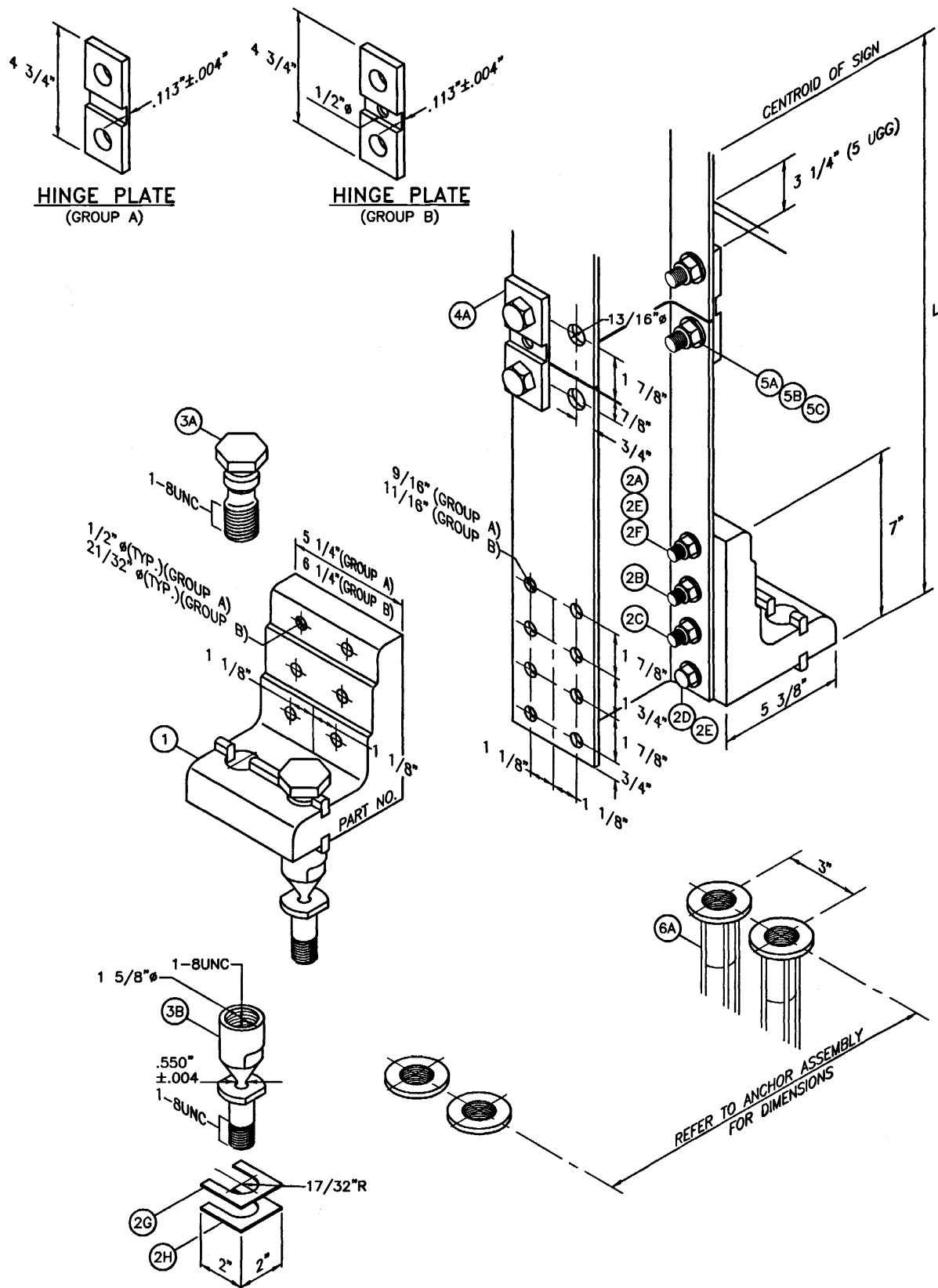
**POST CLIP AND BOLT DETAIL
(FOR EXTRUDED ALUMINUM)**

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**GROUND MOUNTED PRIMARY DIRECTIONAL SIGN POST
ON BREAKAWAY COUPLINGS**

REVISIONS		
NO.	BY	DATE

James H. Gault
CHIEF ENGINEER
TRANSPORTATION

Edward J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
30.4.0



BRACKET SELECTION TABLE									
POST SIZE		#1 E=.100"		#2 E=.150"		#3 E=.200"		#4 E=.250"	
		MIN. L	MAX. L	MIN. L	MAX. L	MIN. L	MAX. L	MIN. L	MAX. L
GROUP A	6 WF 9	12'-2"	25'-0"	8'-7"	12'-1"	6'-7"	8'-6"	--	6'-6"
	6 WF 12	12'-4"	25'-0"	8'-9"	12'-3"	6'-9"	8'-8"	--	6'-8"
	6 WF 15	12'-4"		8'-9"	12'-3"	6'-9"	8'-8"	--	6'-8"
	8 WF 18	14'-1"		10'-0"	14'-0"	7'-9"	9'-11"	--	7'-8"
	8 WF 21	14'-3"		10'-2"	14'-2"	7'-11"	10'-1"	--	7'-10"
GROUP B	10 WF 22	15'-9"	25'-0"	11'-3"	15'-8"	8'-7"	11'-2"	--	8'-6"
	10 WF 26	15'-10"		11'-4"	15'-9"	8'-8"	11'-3"	--	8'-7"
	12 WF 26	17'-6"		12'-6"	17'-5"	9'-7"	12'-5"	--	9'-6"
	14 WF 30	19'-3"		13'-10"	19'-2"	10'-8"	13'-9"	--	10'-7"

BOLT CIRCLE (DIAMETER)		
GROUP A	6 WF 9	15-1/4"
	6 WF 12	15-3/8"
	6 WF 16	15-1/2"
	6 WF 20	15-1/2"
	8 WF 18	17-1/4"
	8 WF 21	17-3/8"
	8 WF 24	17-1/8"
GROUP B	10 WF 22	19-1/2"
	10 WF 26	19-5/8"
	10 WF 30	19-3/4"
	12 WF 26	21-1/2"
	12 WF 30	23-3/16"

NOTES:

1. SHALL MEET ALL REQUIREMENTS OF "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS."
2. ALL HARDWARE (AMERICAN STANDARD) SUPPLIED ISHALL BE HOT DIP GALVANIZED PER ASTM A153 OR MECHANICALLY GALVANIZED PER ASTM B695.
3. FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLING SHALL BE INSTALLED WITH LOCKWASHERS OR LOCKNUTS AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTNERS SHOULD BE MADE AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES UNLESS NOTED OTHERWISE.
4. SQUARE AND LEVEL INDIVIDUAL COMPONENTS TO MINIMIZE NEED FOR SHIMMING.
5. STRUCTURAL STEEL TO BE HOT DIP GALVANIZED PER ASTM A123 AFTER FABRICATION.
6. NO MORE THAN TWO SHIMS UNDERNEATH ANY ONE COUPLING AND NO MORE THAN THREE SHIMS UNDERNEATH ANY TWO COUPLINGS.
7. SELECT PROPER POST SIZE BY REFERRING TO POST SELECTION TABLES FOR MEDIUM AND LARGE SIGNS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BRACKET SELECTION TABLE BOLT CIRCLE AND GENERAL NOTES		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 30.4.1 </div>	
NO.	BY	DATE				
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">  CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>			

INSTALLATION NOTES:

WRENCH SIZES REQUIRED: 9/16", 7/8", 1", 1 1/16", 1 1/4", 1 7/16", 1 5/8"

ANCHOR ASSEMBLY:

1. ASSEMBLE COUPLING ANCHORS 6A TO INSTALLATION TEMPLATE (NOT SHOWN). RIGID STEEL TEMPLATE IS RECOMMENDED.
2. LOWER ENTIRE ANCHOR ASSEMBLY INTO FRESH CONCRETE AND VIBRATE INTO POSITION SO THAT THE TOPS OF THE INDIVIDUAL ANCHORS 6A ARE FLUSH WITH THE FINISHED TOP SURFACE OF THE FOOTINGS.

BRACKET ASSEMBLY:

1. ASSEMBLE BRACKET TO POST WITH BOLTS PROVIDED.
2. SQUARE AND TIGHTEN. (ITEMS 1, 2A, 2B, 2C, 2D, 2E, AND 2F)




HINGE ASSEMBLY:

1. BUTT UPPER AND LOWER POSTS TOGETHER ON FLAT SURFACE.
2. PLACE HINGE PLATES 4A ON OUTER FLANGES AND SECURE WITH BOLTS 5A, 5B AND 5C. SNUG BUT DO NOT TIGHTEN.
3. MAKE SURE UPPER AND LOWER POSTS ARE IN ALIGNMENT, THEN TIGHTEN ALL NUTS 5C TO PROOF LOAD (1/2 TURN BEYOND SNUG).

COUPLING ASSEMBLY:

1. SUSPEND POST OVER FOOTING AND INSERT SPECIAL BOLTS 3A THROUGH BRACKET 1.
2. BELOW BRACKET, THREAD COUPLINGS 3B INTO ANCHORS 6A BUT LEAVE LOOSE.
3. LOWER POST WITH SPECIAL BOLTS 3A ONTO LOOSE COUPLINGS 3B AND THREAD BOLTS INTO COUPLINGS.
4. THREAD COUPLINGS ALL THE WAY IN ANCHORS 6A.
5. TIGHTEN SPECIAL BOLTS 3A. DO NOT PLACE TORQUE ACROSS NECKED DOWN PORTION OF COUPLINGS. WRENCH FLATS ARE PROVIDED ON EITHER SIDE FOR PROPER TIGHTENING.
6. IF POST IS NOT PLUMB, INSERT SHIMS 2G AND 2H BETWEEN COUPLINGS 3B AND ANCHOR 6A.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			INSTALLATION NOTES		
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE

REVISIONS			BILL OF MATERIALS		
NO.	BY	DATE	ITEM	DESCRIPTION	QTY./POST
			1	BRACKET	2
				6061- T6 ALUMINUM (SEE BRACKET SELECTION TABLE)	
				BRACKET HARDWARE ASSEMBLY:	
			2A	BOLT	4
				GROUP A - 1/2"-13UNC x 2-1/2", HEX HEAD, ASTM A325, GALV., ASTM A153	
				GROUP B - 5/8"-11UNC x 2-3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
			2B	BOLT	4
				GROUP A - 1/2"-13UNC x 2-3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
				GROUP B - 5/8"-11UNC x 3", HEX HEAD, ASTM A325, GALV., ASTM A153	
			2C	BOLT	4
				GROUP A - 1/2"-13UNC x 3", HEX HEAD, ASTM 325, GALV., ASTM 153	
				GROUP B - 5/8"-11UNC x 3-1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
			2D	CAP SCREW	4
				GROUP A - 1/2"-13UNC x 1-1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	
				GROUP B - 1/2"-13UNC x 1-1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	
			2E	LOCKWASHER	16
				GROUP A - 1/2", ANSI B18-21-1, GALV., ASTM A153	
				GROUP B - 5/8", ANSI B18-21-1, GALV., ASTM A153	
			2F	NUT	2
				GROUP A - 1/2"-13UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	
				GROUP B - 5/8"-11UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	
			2G	SHIM	2
				GROUP A - 21" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	
				GROUP B - 1" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	
			2H	SHIM	2
				1" HORSESHOE, 14 GAUGE, GALV., STEEL SHEET	
				COUPLING AND BOLT ASSEMBLY:	
			3A	SPECIAL BOLT	4
				1"-8 UNC ASTM A449, GALV., ASTM A153/B695	
			3B	COUPLING	4
				1"-8 UNC LP., AMS 63780, GALV., ASTM A153, POLYESTER COAT **	
				HINGE ASSEMBLY:	
			4A	HINGE PLATE	4
				GROUP A - TYPE B525, AISI A130 STEEL, GALV., ASTM A123	
				GROUP B - TYPE B650, AISI 4130 STEEL, GALV., ASTM A123	
				HINGE HARDWARE ASSEMBLY:	
			5A	BOLT	8
				3/4"-10UNC x 2-1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
			5B	LOCKWASHER	8
				3/4" ANSI B18-21-1, GALV., ASTM A153	
			5C	NUT	8
				3/4"-10UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A153	
				ANCHOR ASSEMBLY:	
			6A	ANCHOR	4
				GROUP A - 1"-8UNC, 304 S.S. FERRULE, AISI 1038 ROD, AISI 1008 COIL	
				GROUP B - 1"-8UNC, 304 S.S. FERRULE, AISI 1008 COIL	

*WITH EXCEPTION TO DECARBURIZATION AND MACROSTRUCTURE CLAUSES
 **2-4 MIL. THICK MORTON POWDER COATINGS' 20-7037 POLYESTER POWDER COAT

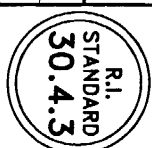
BILL OF MATERIALS

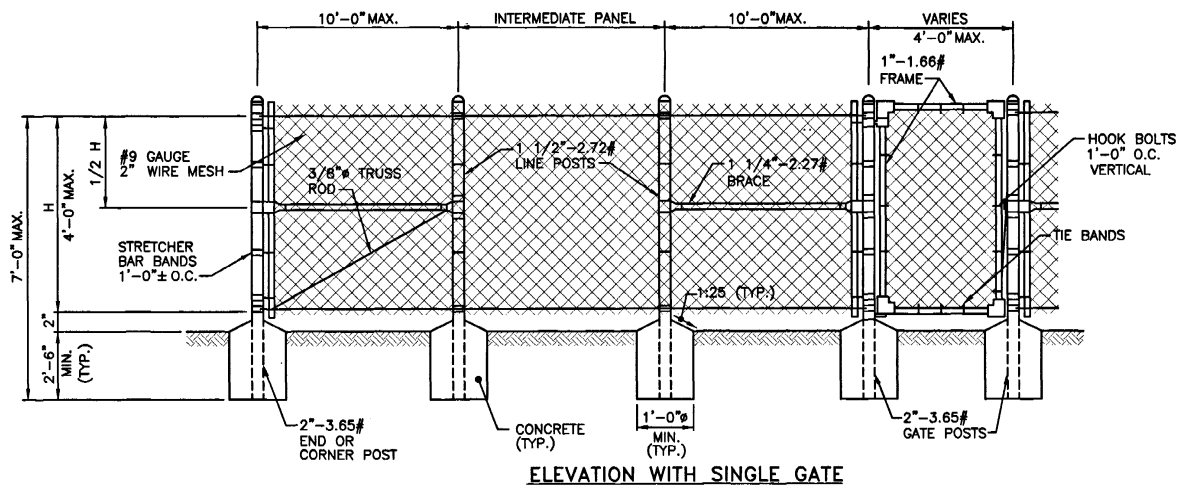
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHIEF ENGINEER
 TRANSPORTATION

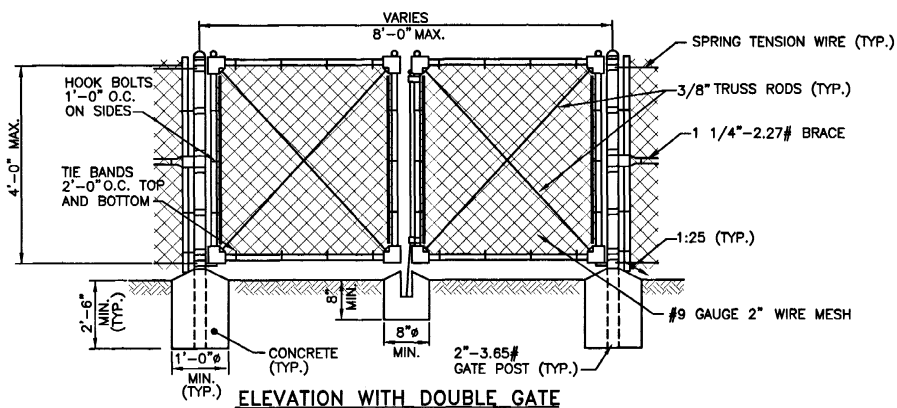
CHIEF DESIGN ENGINEER
 TRANSPORTATION

ISSUE DATE
 JUNE 15, 1998





- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
 2. INTERMEDIATE POSTS REQUIRED EVERY 200'-0".
 3. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE
3'-0" TO 4'-0"

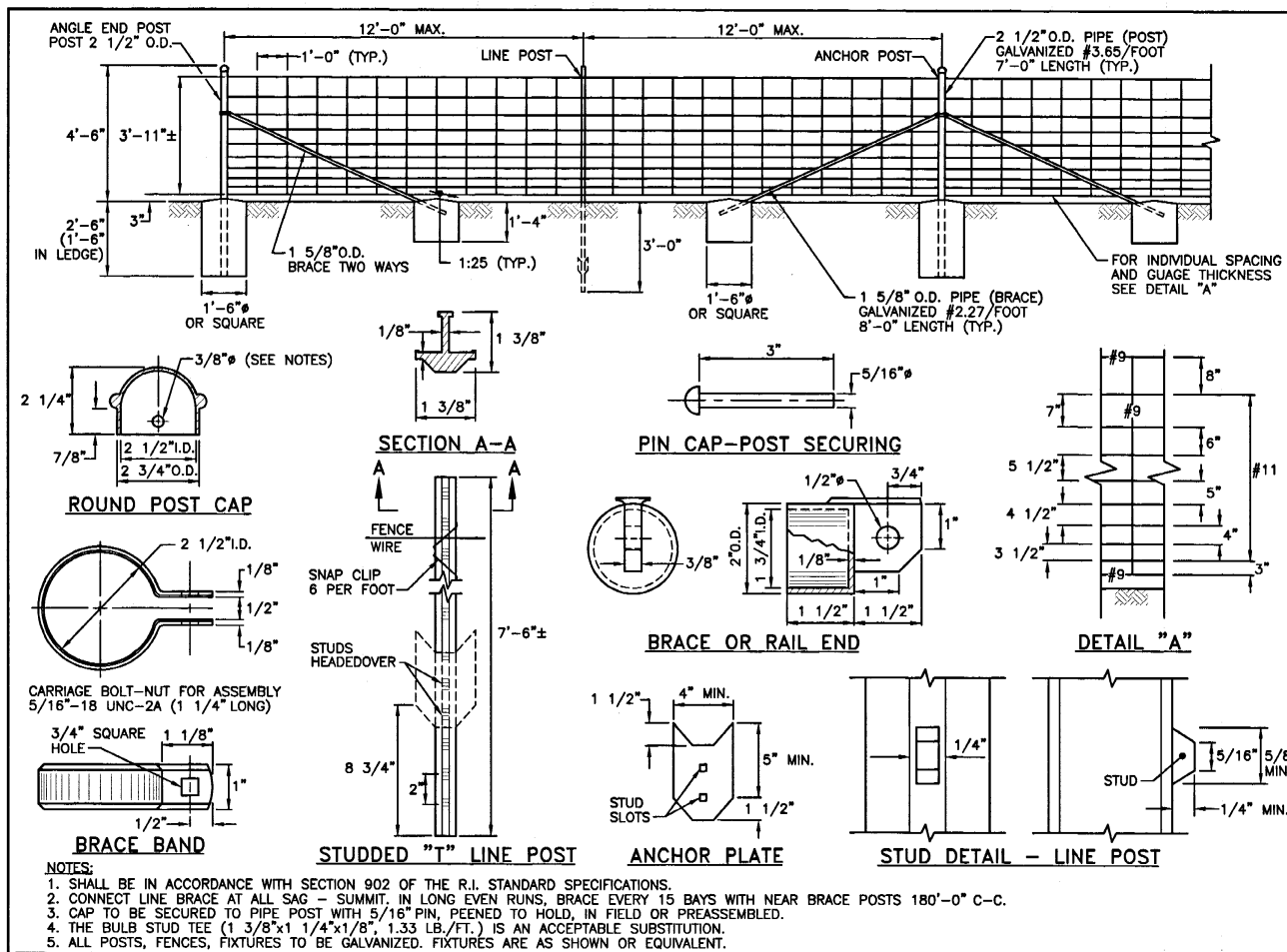
JUNE 15, 1998
ISSUE DATE

31.1.0
STANDARD
R.I.

ENGINEER
TRANSPORTATION

REVISIONS		DATE
NO.	BY	

**R.I.
STANDARD
31.2.1**



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
WOVEN WIRE RIGHT-OF-WAY FENCE
(STEEL POST)

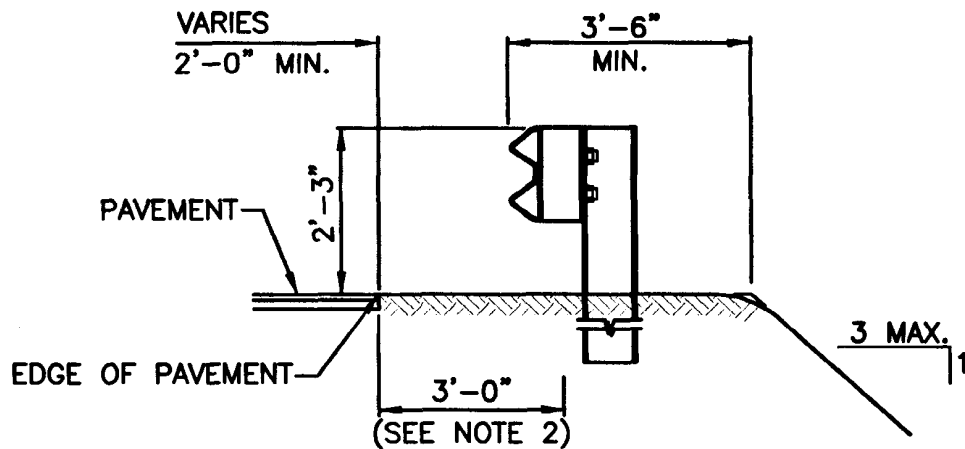
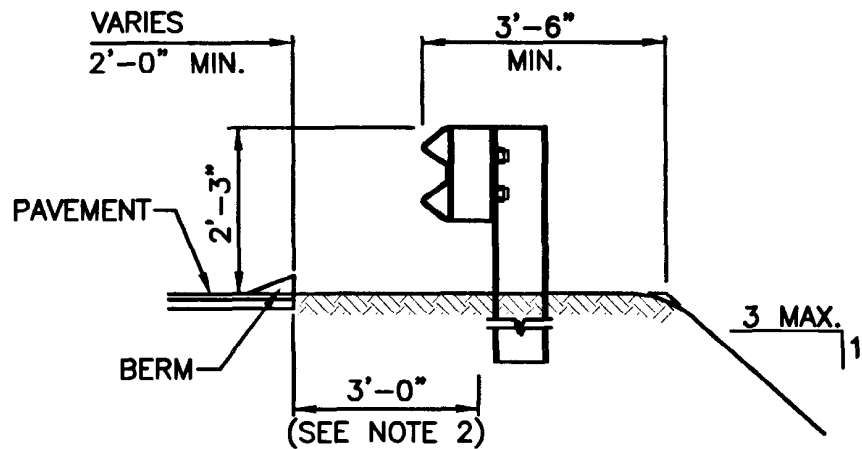
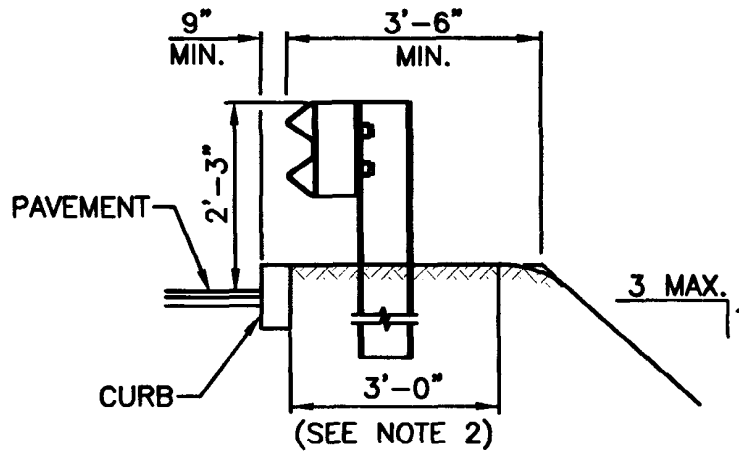
R.I.
STANDARD
31.3.0

JUNE 15, 1998
ISSUE DATE

ENGINEER
TRANSPORTATION

DESIGNED BY
TRANSPORTATION

NO.	BY	DATE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TREAT THIS AREA WITH HERBICIDE AFTER THE GUARD RAIL INSTALLATION AS REQUIRED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

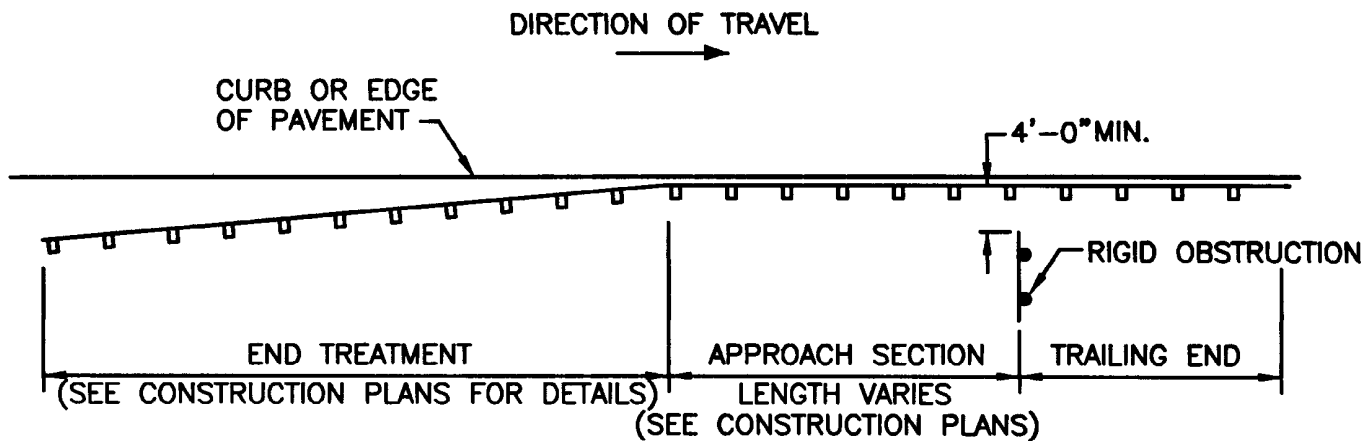
TYPICAL GUARDRAIL INSTALLATION

James H. Casale
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

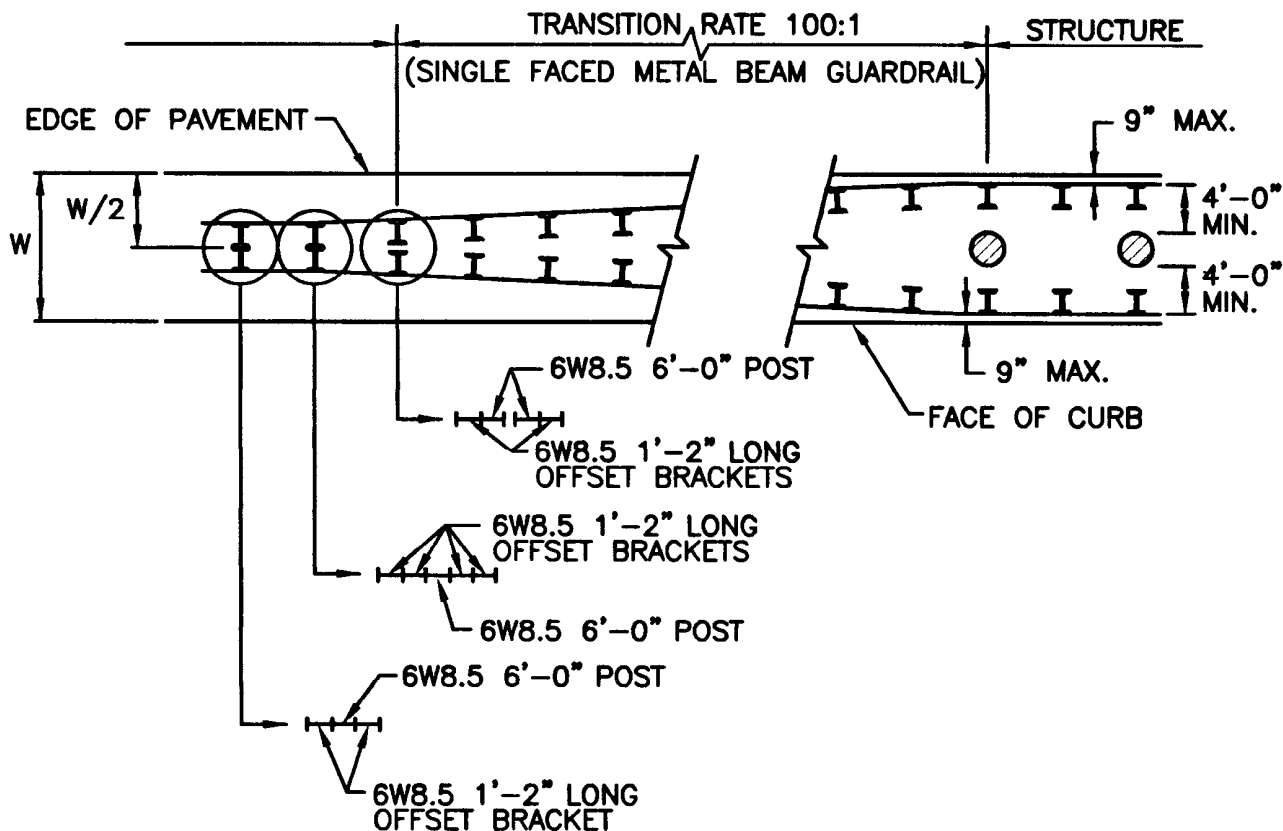
JUNE 15, 1998
ISSUE DATE





NOTE: THIS DETAIL IS ONLY APPLICABLE IF OBSTRUCTION IS LESS THAN 30'-0" FROM THE EDGE OF THE TRAVEL LANE.

DETAIL AT ROADSIDE OBSTRUCTION



DETAIL AT PIERS

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

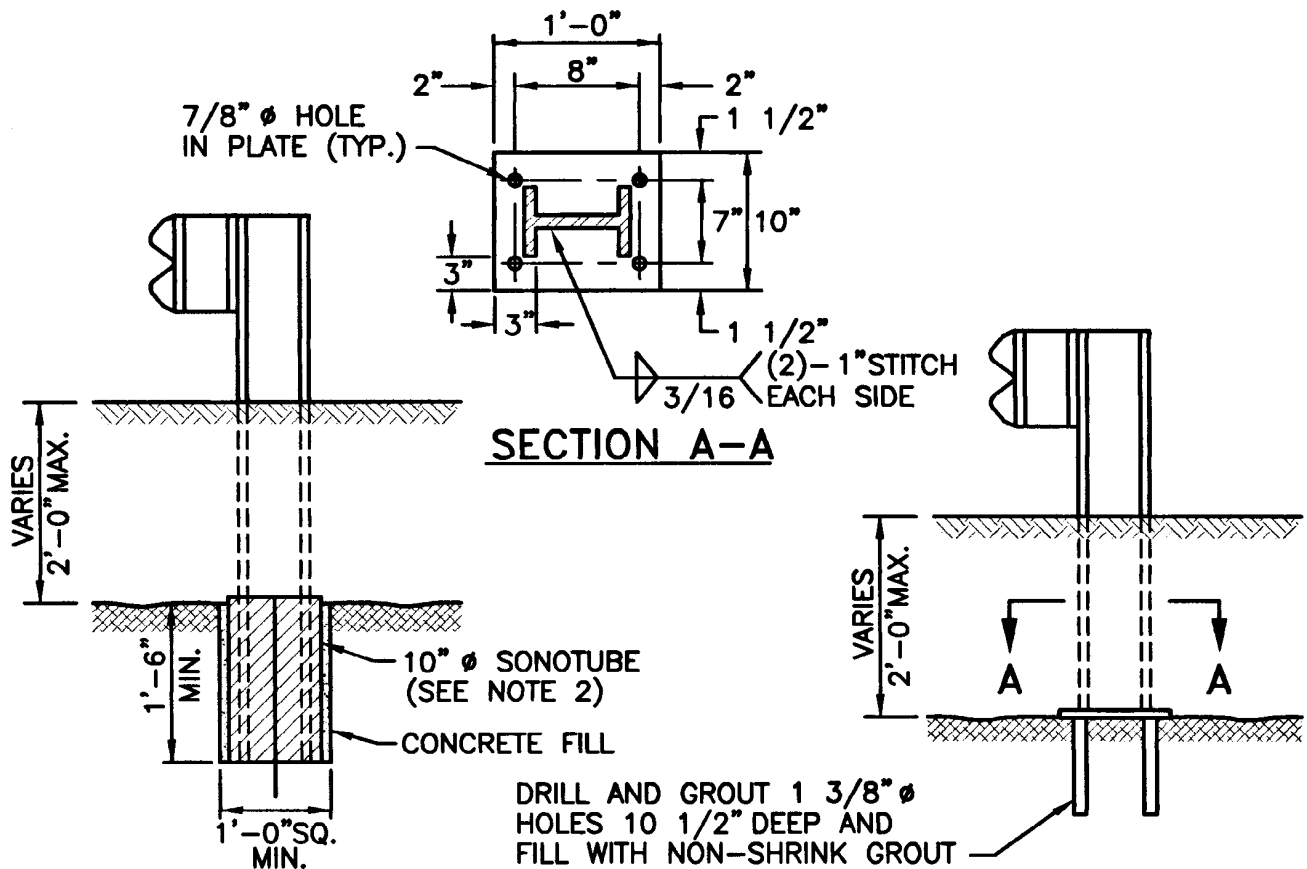
TYPICAL GUARDRAIL INSTALLATION AT STRUCTURES

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
34.1.1



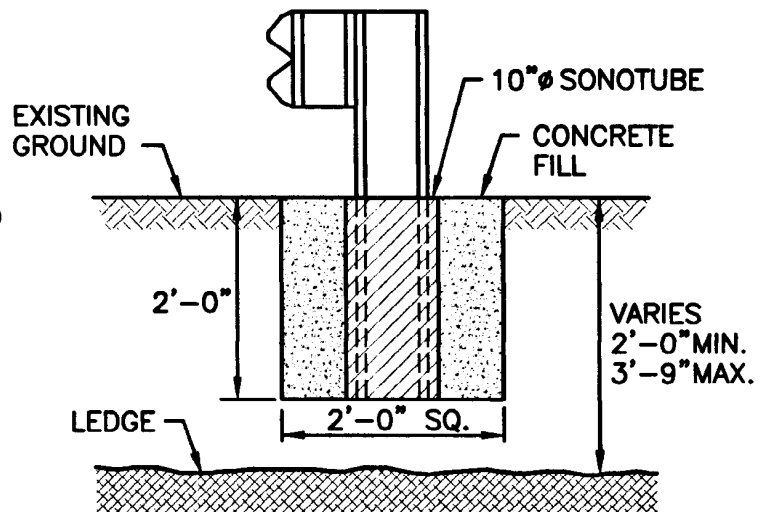
SOFT TO MEDIUM LEDGE

HARD LEDGE

LEDGE 0'-0" TO 0'-2" BELOW GROUND

NOTES:

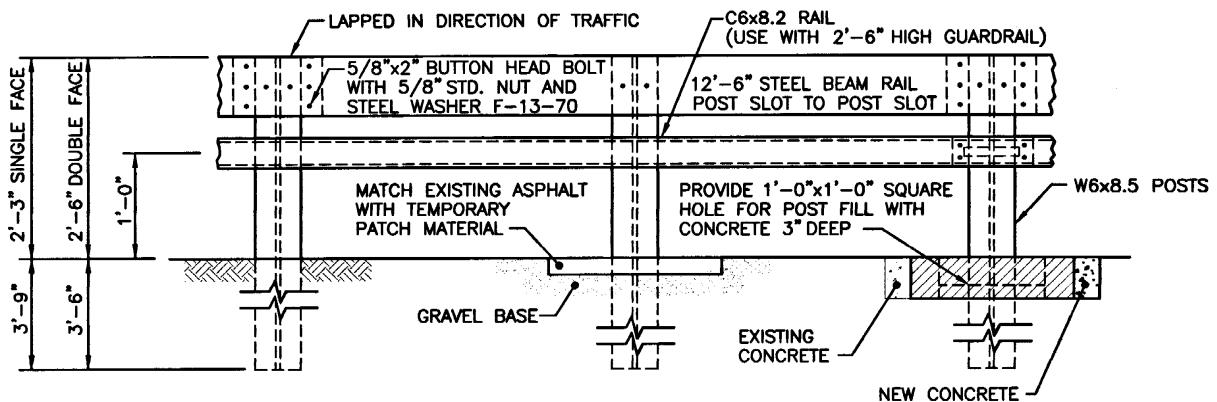
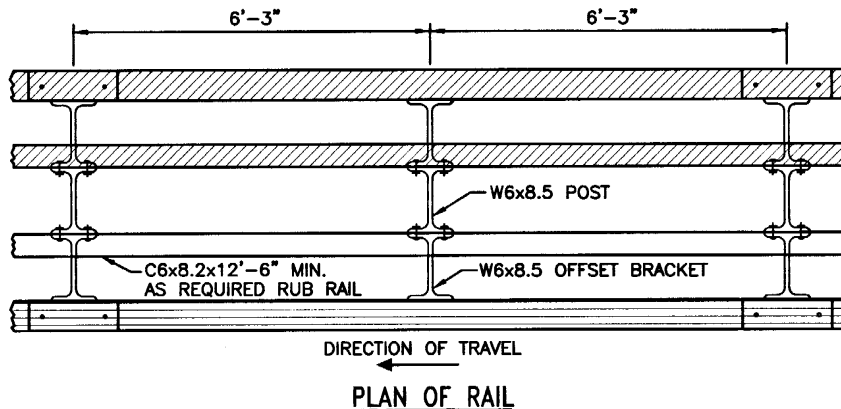
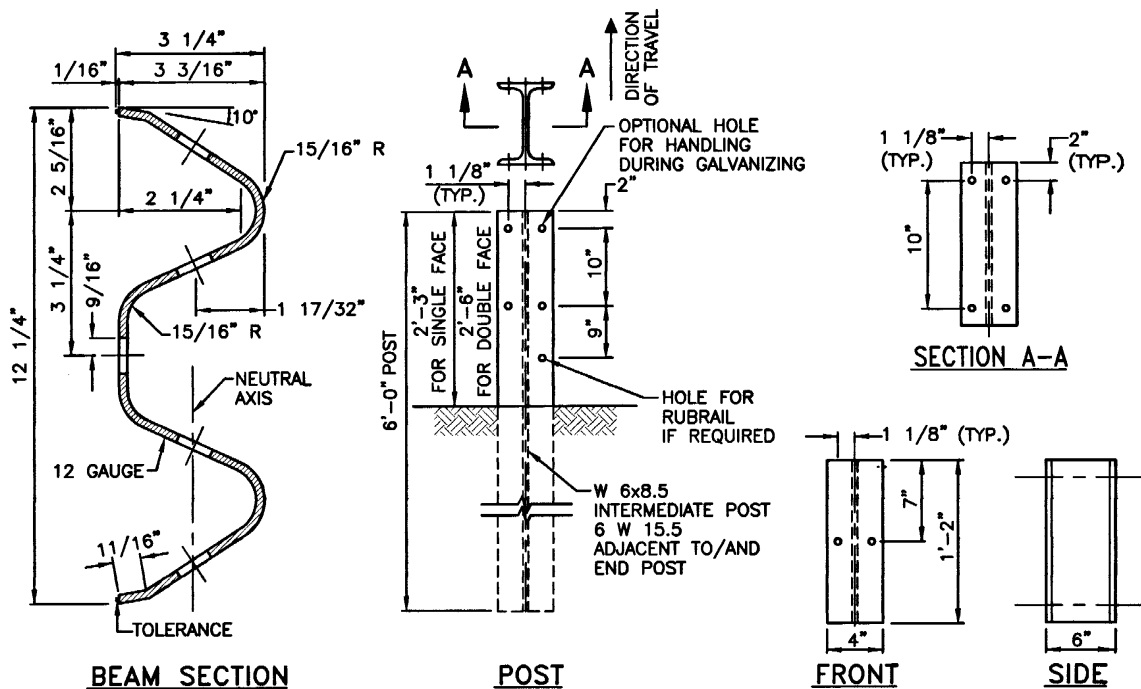
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. A 10" ϕ DRILLED HOLE 1'-6" DEEP IS AN ACCEPTABLE SUBSTITUTE.
3. WET SAND FILL, HAND COMPACTED SHALL BE USED TO BACKFILL SONOTUBE AFTER INSERTING GUARDRAIL POST.



LEDGE 2'-0" TO 3'-9" BELOW GROUND

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TYPICAL GUARDRAIL POST INSTALLATION IN LEDGE		<div><div>R.I. STANDARD 34.1.2</div></div>
NO.	BY	DATE			
			<div><div><div>John A. Czapla</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>		



NOTE: DEPRESSION TO BE FILLED WITH CORRESPONDING MATERIAL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
1. POST AND OFFSET BRACKET TO BE FABRICATED FROM 6"x4" 8 1/2 LBS/FT. STEEL "H" SECTIONS.
2. POST AND BRACKET BOLT HOLES TO BE OVAL UNLESS OTHERWISE SPECIFIED.
4. ALL HOLES IN OFFSET BRACKETS SHALL BE 13/16".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL

REVISIONS
NO. BY DATE

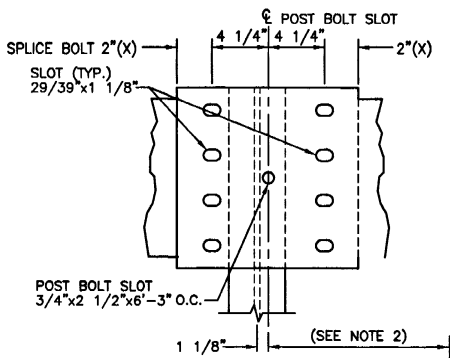
NO.	BY	DATE

James A. Gaudin
CHIEF ENGINEER
TRANSPORTATION

Edward J. Porter, Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

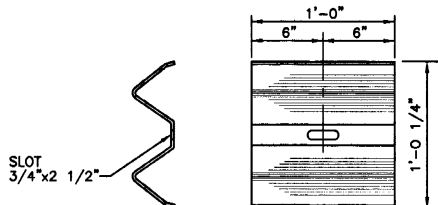
R.I.
STANDARD
34.2.0



NOTES:

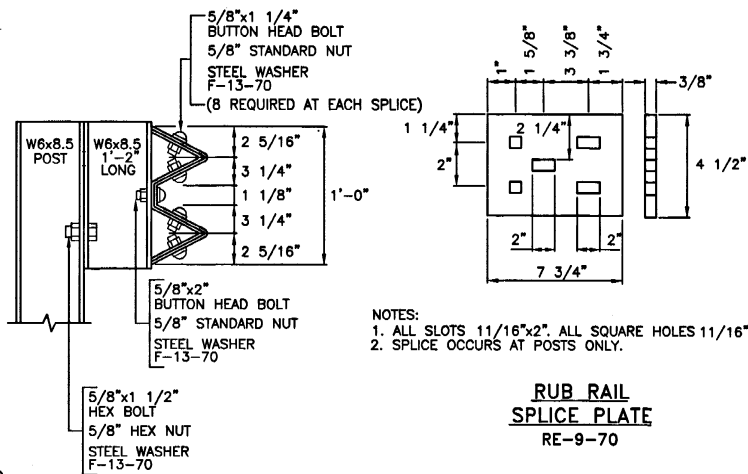
1. (X) TOLERANCE $\begin{cases} +1 \frac{1}{4}" \\ -1 \frac{1}{4}" \end{cases}$
2. END POST BOLT SLOTS 12'-0" O.C.
INTERMEDIATE POST SLOT 6'-3" O.C. (UNLESS OTHERWISE NOTED)

SPlice DETAIL



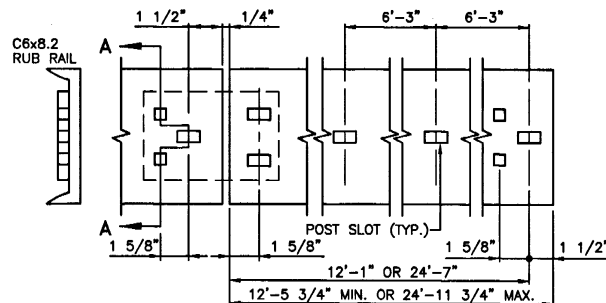
NOTE: THIS BACK-UP PLATE IS PLACED BEHIND RAIL ELEMENTS AT INTERMEDIATE (NON-SPLICE) POSTS.

BACK-UP PLATE



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 901
OF THE R.I. STANDARD SPECIFICATIONS.

SECTION



SECTION A-A

RUB RAIL

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL DETAILS

REVISIONS
NO. BY DATE

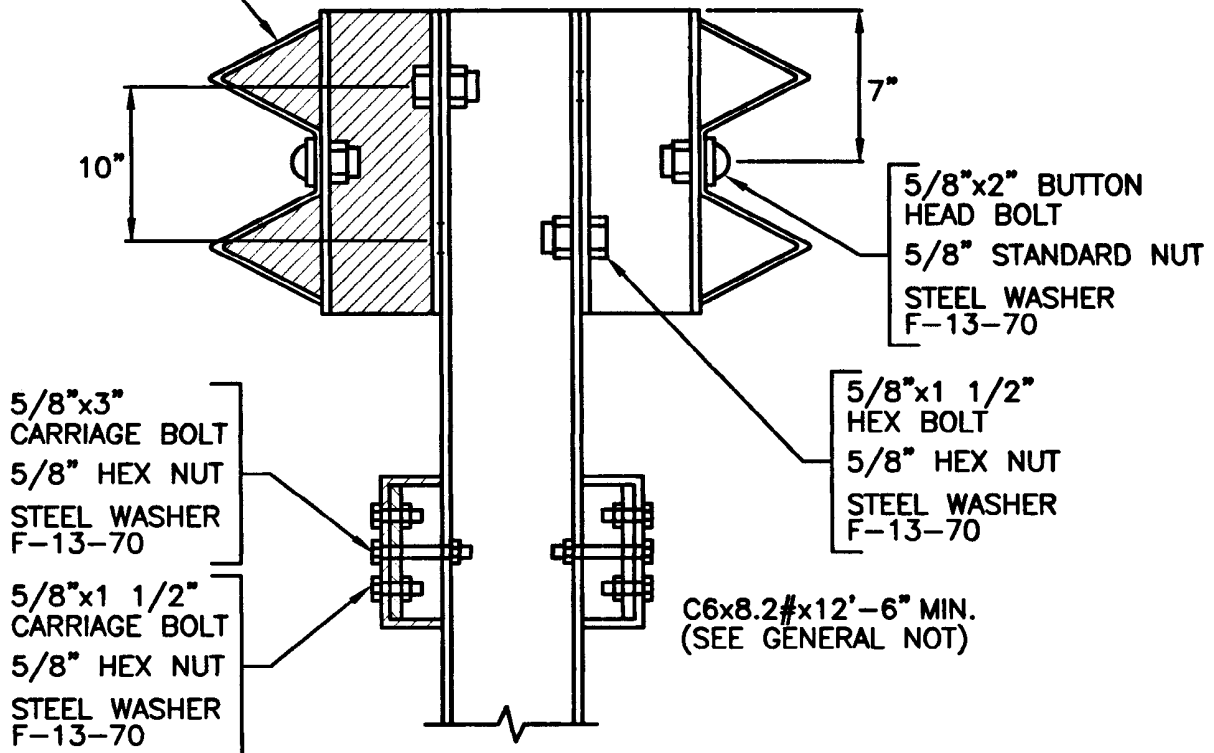
R.I.
STANDARD
34.2.1

JUNE 15, 1998
ISSUE DATE

Edward P. Gault
CHIEF DESIGN ENGINEER
TRANSPORTATION

Edward P. Gault
CHIEF DESIGN ENGINEER
TRANSPORTATION

METAL BEAM RAIL



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.
3. AFTER GALVANIZING THE NUT SHALL BE FREE RUNNING ON THE BOLT.
4. THE RAIL ELEMENT SHALL BE SHOP CURVED WHEN THE PLACEMENT OF GUARDRAIL IS ON A CURVE HAVING A RADIUS OF 150'-0" OR LESS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**STEEL BEAM GUARDRAIL
DOUBLE FACED ASSEMBLY**

REVISIONS		
NO.	BY	DATE

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

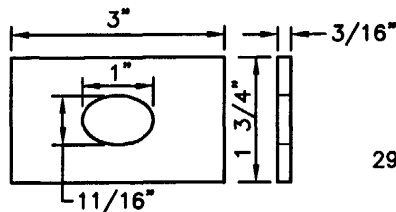
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

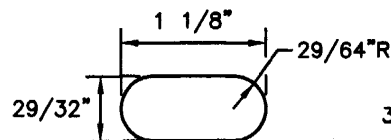


NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

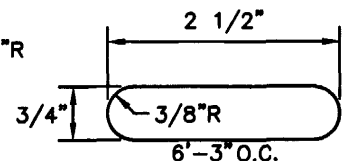
BOLT SELECTION TABLE				
INTENDED USE	BOLT TYPE	L	THREAD LENGTH	NUT TYPE
AS SPLICE ON "W" BEAM GUARD RAIL	5/8" Ø BUTTON HEAD	1 1/4"	FULL	5/8" Ø STANDARD
FOR FASTENING "W" BEAM RAIL TO STEEL POSTS OR BRACKET	5/8" Ø BUTTON HEAD	2"	1 1/2" MIN.	5/8" Ø STANDARD
AS SPLICE BOLT FOR CHANNEL RUB RAIL ELEMENTS USED IN "W" BEAM GUARD RAIL	5/8" Ø CARRIAGE HEAD	1 1/4"	FULL	5/8" Ø HEX
FOR FASTENING CHANNEL RUB RAIL ELEMENTS TO STEEL POSTS IN "W" BEAM GUARD RAIL	5/8" Ø CARRIAGE HEAD	3"	1 1/2" MIN.	5/8" Ø HEX
FOR FASTENING STEEL BLOCK TO STEEL POSTS	5/8" Ø HEX	1 1/2"	FULL	5/8" Ø HEX



RECTANGULAR
PLATE WASHER F-12-70



SPLICE BOLT
SLOT



POST BOLT SLOT

NOTE: USE ONLY AT 8th POST ON STD. 34.3.1

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL FIXTURES

REVISIONS

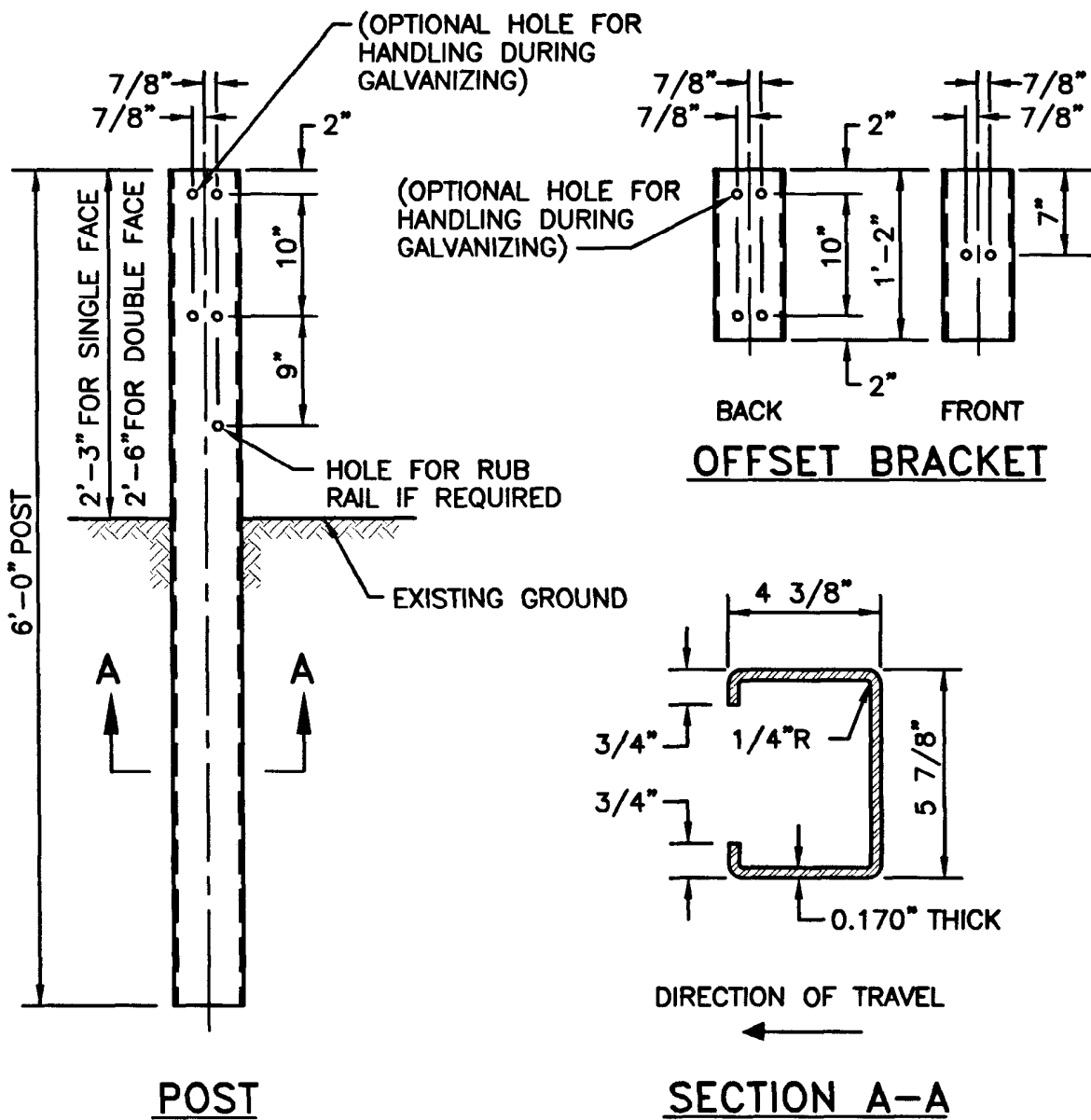
NO.	BY	DATE

CHIEF ENGINEER
TRANSPORTATION

CHIEF DESIGN ENGINEER
TRANSPORTATION

ISSUE DATE
JUNE 15, 1998





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL HOLES TO BE 13/16" ϕ .
3. ONLY ONE TYPE OF POST SHALL BE USED IN A SINGLE RUN. OPEN SIDE SHALL FACE AWAY FROM DIRECTION OF ONCOMING TRAFFIC.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

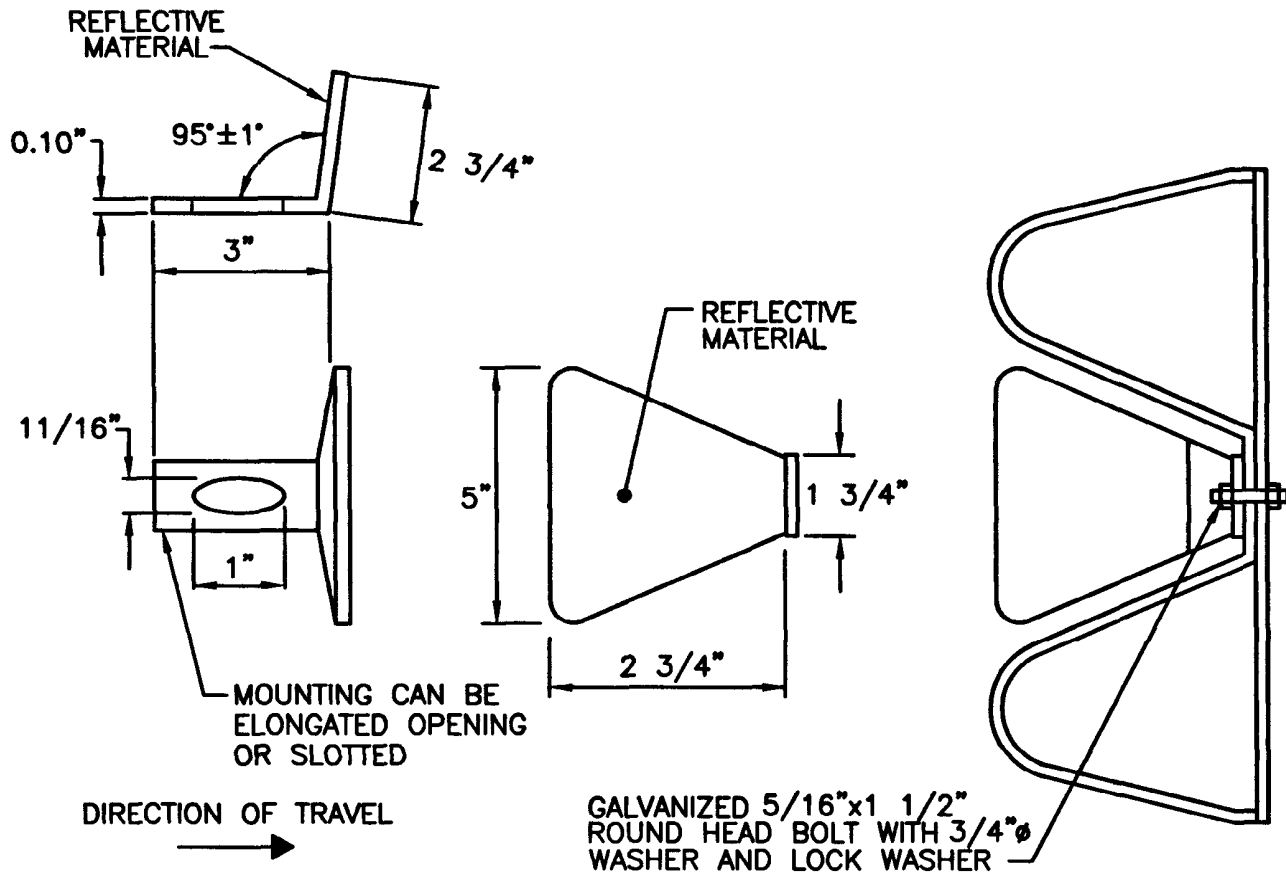
**STEEL BEAM GUARDRAIL POST
AND OFFSET BRACKET "C" SECTION**

James A. Casale
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





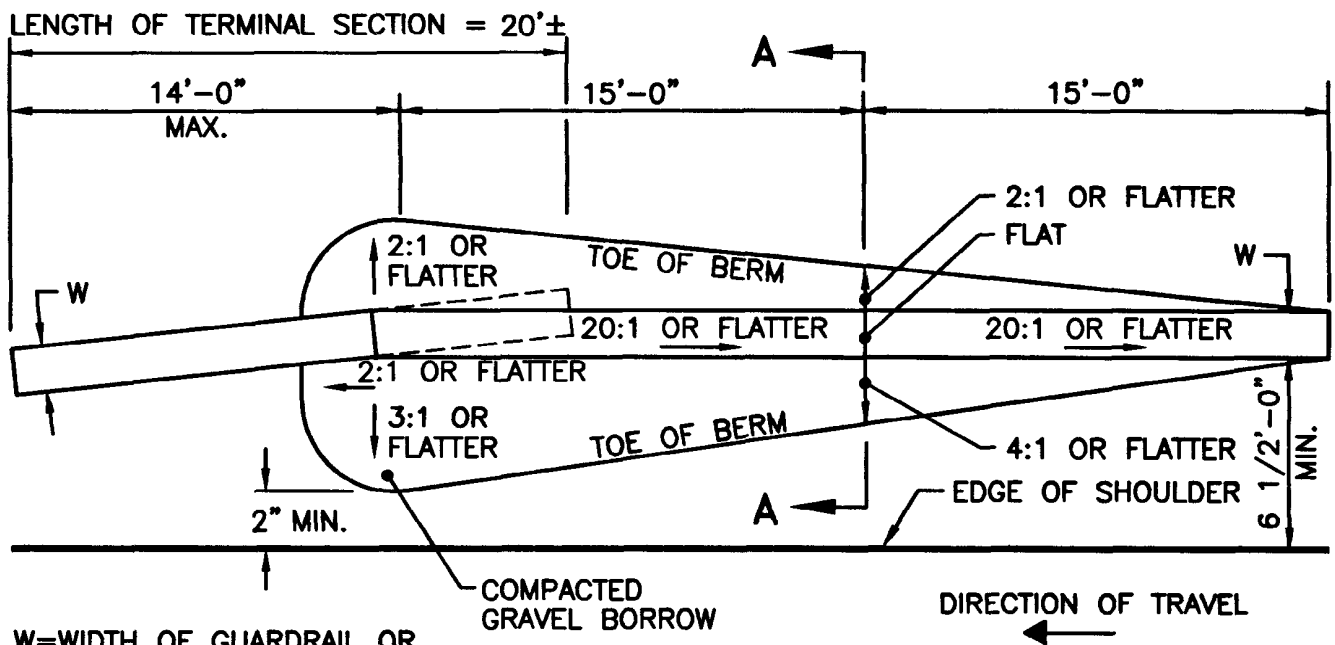


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. REFLECTIVE MATERIAL SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER.
3. SILVER REFLECTORS SHALL BE INSTALLED ON THE RIGHT SIDE OF THE ROAD AND AMBER ON THE LEFT, IN ACCORDANCE WITH MUTCD GUIDELINES FOR PAVEMENT EDGELINE MARKINGS.
4. THE REFLECTORIZED ALUMINUM WASHER IS TO BE PLACED IN VALLEY OF BEAM WHEN MOUNTING BEAM ONTO EACH SIXTH POST.
5. REFLECTORIZED GALVANIZED WASHERS MAY BE USED AS AN OPTION.

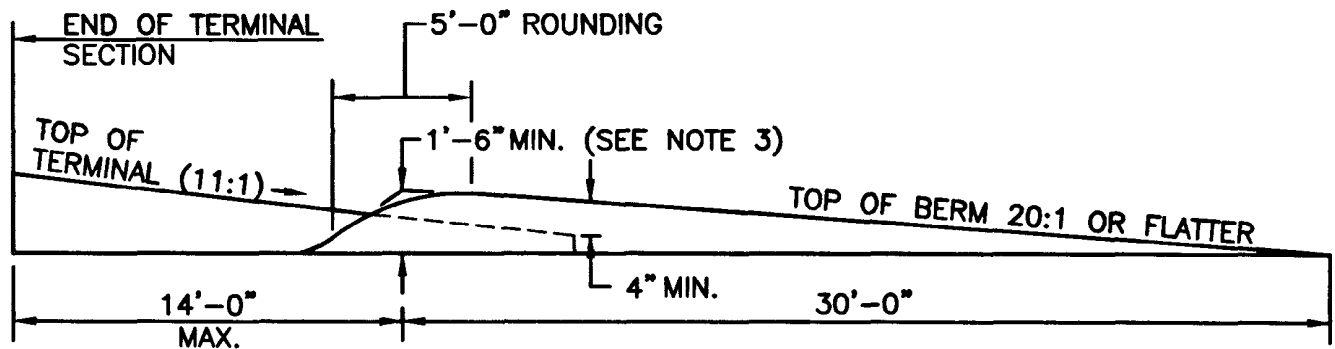
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR		<div><div>R.I. STANDARD 34.2.5</div></div>		
NO.	BY	DATE					
			<div><div></div><div>CHIEF ENGINEER TRANSPORTATION</div></div>	<div><div></div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div>			
			JUNE 15, 1998				
			ISSUE DATE				

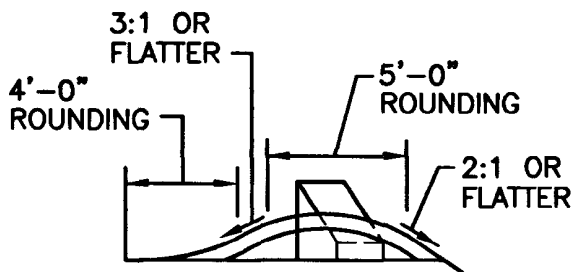


W=WIDTH OF GUARDRAIL OR
WIDTH OF GUARDRAIL AND POST

PLAN



ELEVATION



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE ACTUAL DIMENSIONS OF THE BERM SHALL VARY IN ACCORDANCE WITH THE VARIABLE DIMENSIONS SHOWN AND AS DIRECTED BY THE ENGINEER.
3. SEE PLANS FOR DETAILS OF SPECIFIED ROADSIDE BARRIER AND TERMINAL SECTIONS.
4. IF THE TAPER ON THE TOP OF THE TERMINAL SECTION IS STEEPER THAN 11:1, THE MINIMUM HEIGHT OF THE BERM SHALL BE 2'-0".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

EARTH BERM FOR ROADSIDE BARRIER TERMINAL SECTIONS

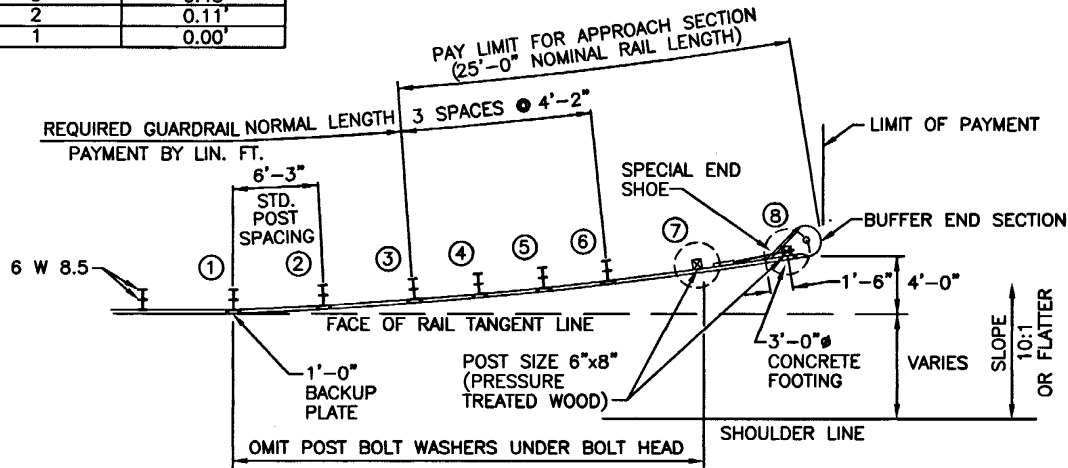
John H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

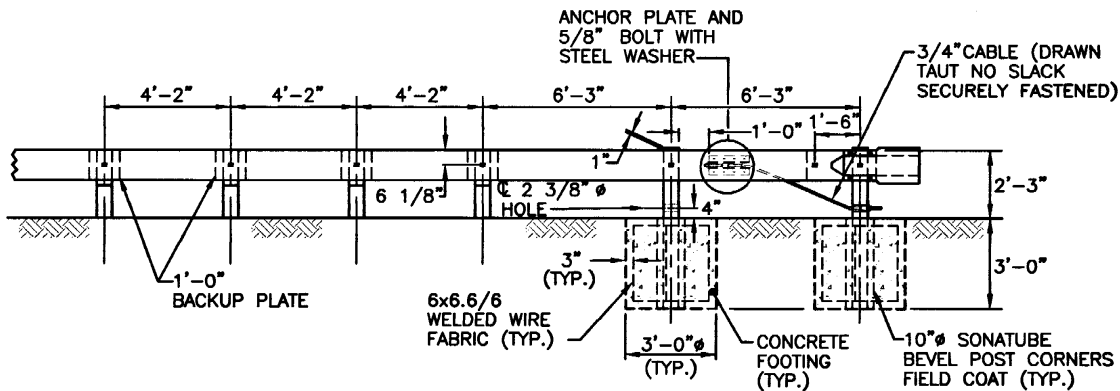
JUNE 15, 1998
ISSUE DATE



OFFSET TO FACE OF POST FROM BACK OF RAIL ALIGNMENT	
POST NO.	OFFSET
8	4.00'
7	2.79'
6	1.79'
5	1.25'
4	0.80'
3	0.45'
2	0.11'
1	0.00'



PLAN



ANCHORAGE DETAIL

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD IS NOT TO BE USED WHEN THE DESIGN SPEED IS EXCEEDS 45 MPH.
3. ALL METAL BEAM RAIL, POST, OFFSET BRACKETS, NUTS, BOLTS, WASHERS, AND ALL OTHER ACCESSORIES SHALL BE HOT DIPPED GALVANIZED.
4. ALL DIMENSIONS SUBJECT TO MANUFACTURERS' TOLERANCES.
5. AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT.
6. THE RAIL ELEMENT SHALL BE SHOP CURVED WHEN THE PLACEMENT OF GUARDRAIL IS ON A CURVE HAVING A RADIUS OF 150'-0" OR LESS. NO ADDITIONAL PAYMENT SHALL BE ALLOWED FOR THIS WORK.
7. POST AND OFFSET BRACKET TO BE FABRICATED FROM 6"x4" 8 1/2 LBS. STEEL "H" SECTIONS.
8. POST AND BRACKET BOLT HOLES TO BE OVAL UNLESS OTHERWISE SPECIFIED.
9. ALL HOLES SHALL BE 13/16".
10. FOR DETAILS ON CABLE, ANCHOR PLATE, END POST, BUFFER END SECTION, AND BACKUP PLATE SEE STD. 34.3.3.
11. TO FACILITATE REMOVAL OF BROKEN WOOD POST, 10" (ONLY) PERMANENT CARDBOARD SONATUBES OR METAL SLEEVES ARE TO BE INSTALLED AROUND THE POST PRIOR TO CASTING THE FOOTINGS. (SLEEVE TO BE FILLED WITH CONCRETE SAND.) CORNERS OF POST TO BE BEVELED TO FIT 10" SONATUBE. FIELD TREAT THE BEVELS WITH CHROMATED COPPER.
12. FOR TRAILING END OF GUARDRAIL ADJACENT TO ONE-WAY ROADWAY OMIT TERMINAL SECTION. NEXT TO LAST POST TO BE A LINE POST.
13. USE NO WASHERS UNDER POST BOLT HEADS FROM FIRST THRU SEVENTH POSTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

GUARDRAIL END SECTION

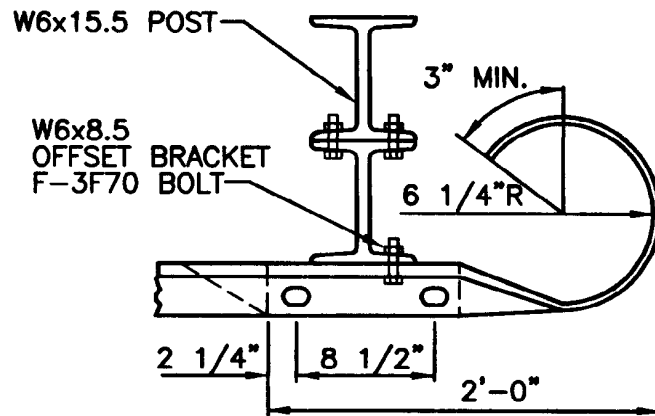
REVISIONS		
NO.	BY	DATE

James K. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

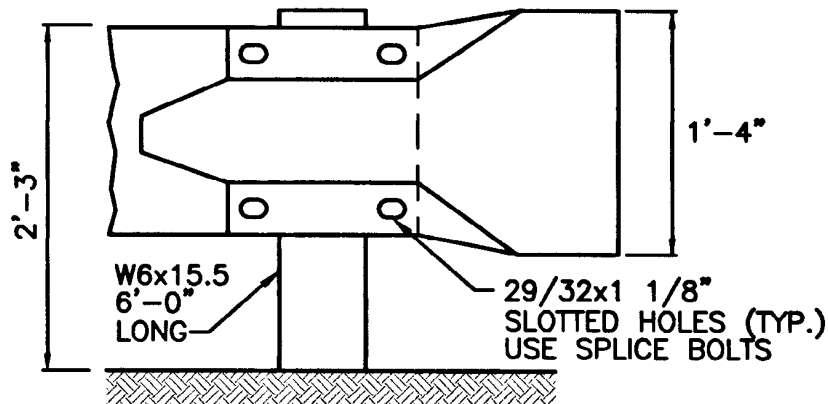
Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





PLAN

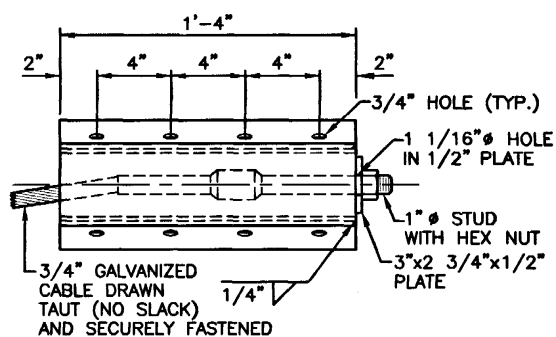
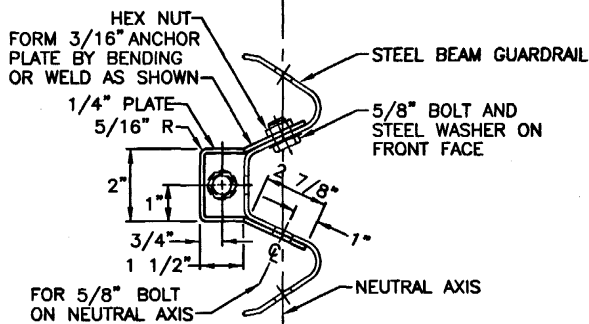


ELEVATION

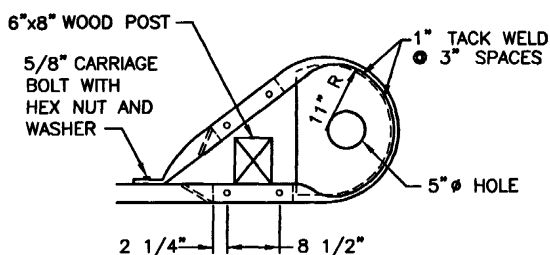
NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

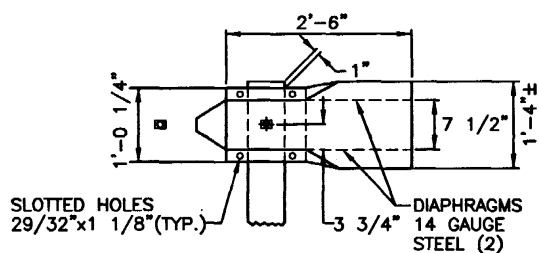
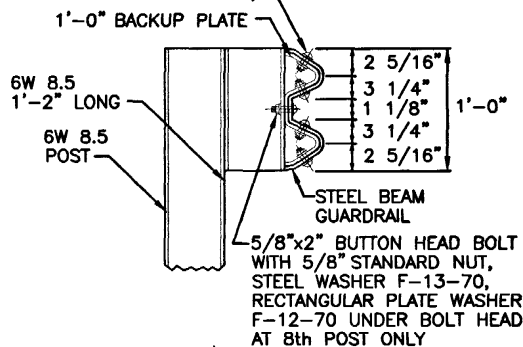
REVISIONS			TERMINAL END SECTION (SINGLE FACE)	<div><div>R.I. STANDARD 34.3.2</div></div>
NO.	BY	DATE		
			<div><div><div>James H. Capaldi</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>	



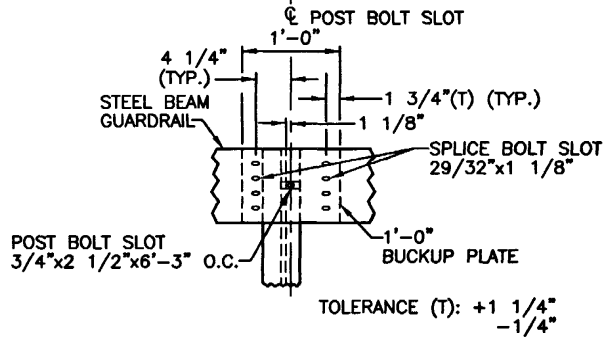
ANCHOR PLATE DETAILS



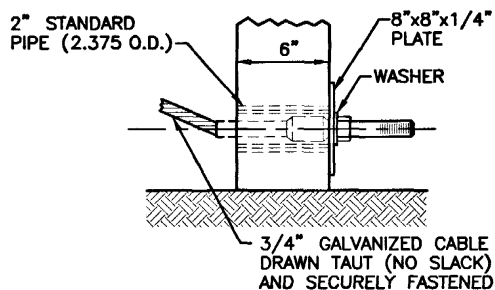
5/8"x1 1/4" BUTTON HEAD BOLT
WITH 5/8" STANDARD NUT AND
STEEL WASHER F-13-70
(8 REQUIRED AT EACH SPLICE)



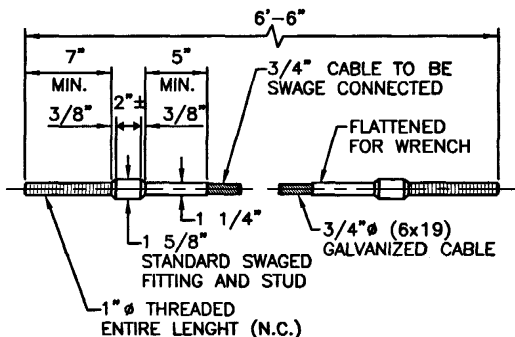
BUFFER END DETAILS



BACKUP PLATE DETAILS



ANCHORAGE DETAIL AT POST



CABLE ASSEMBLY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

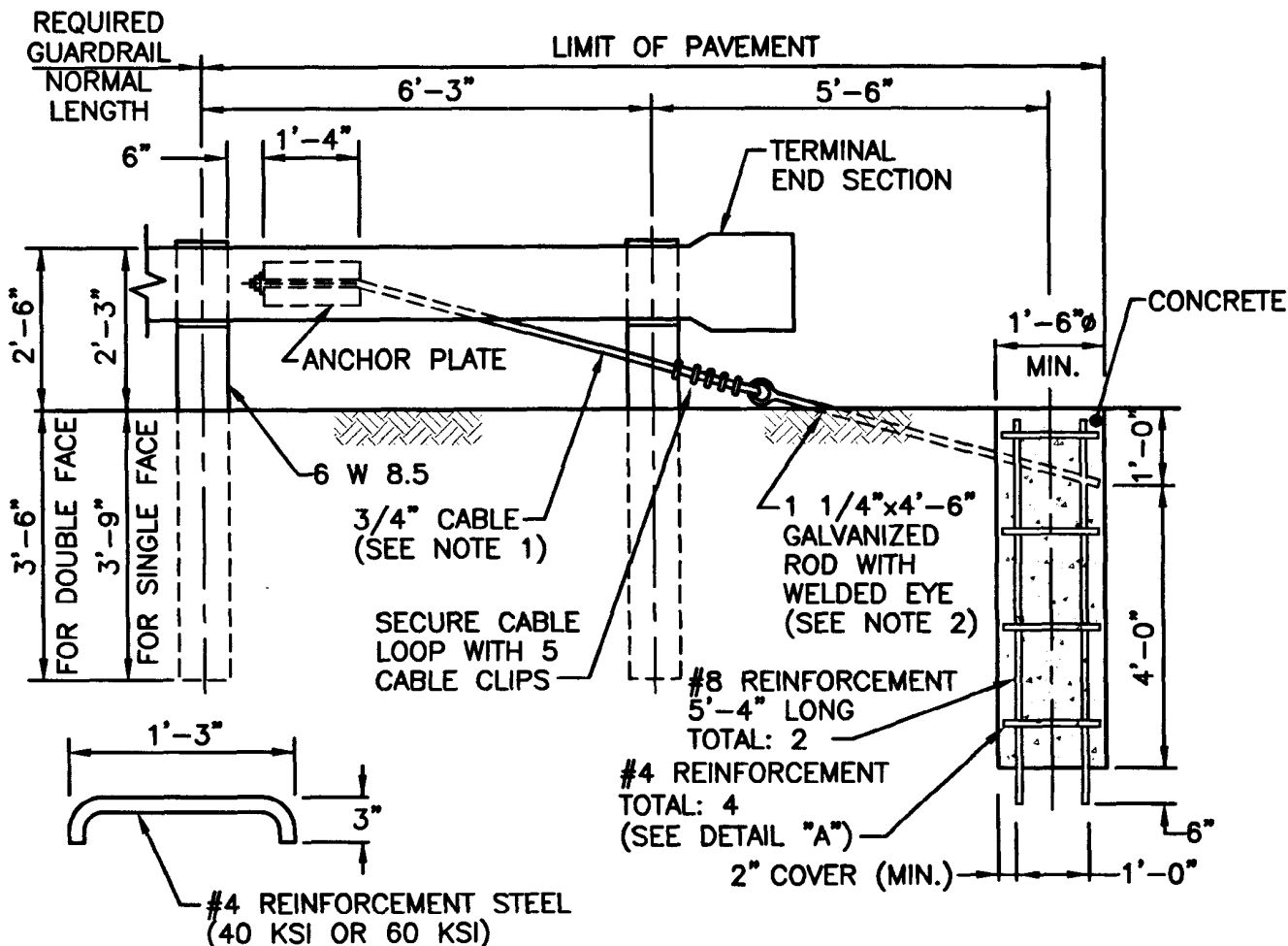
John A. Capelli
CHIEF ENGINEER
TRANSPORTATION

ANCHORAGE DETAILS APPROACH END SECTION

Edward J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
34.3.3



DETAIL "A"

1 1/2" EYES
ORIENT TO ACCOMMODATE
TURNBUCKLE CONNECTIONS
FOR CABLE BARRIER

1 1/4"x4'-6"
GALVANIZED RODS
PARALLEL TO AXIS
OF GUARDRAIL AT
POINT OF ANCHORAGE

#8 REINFORCEMENT

1 1/4"x4'-6"
GALVANIZED ROD

1 1/2"
EYE

1'-6" MIN.
CONCRETE ANCHOR

6"
MIN.

6"
MAX.

#8 REINFORCEMENT

5 1/2"

**DOUBLE GUARDRAIL
ANCHOR**

**SINGLE GUARDRAIL
ANCHOR**

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. CABLE TO BE PARALLEL TO GUARDRAIL FOR STRAIGHT RUNS OF RAIL. CABLE MAY HAVE ANGLE POINT AT ANCHOR PLATE IF GUARDRAIL IS CURVED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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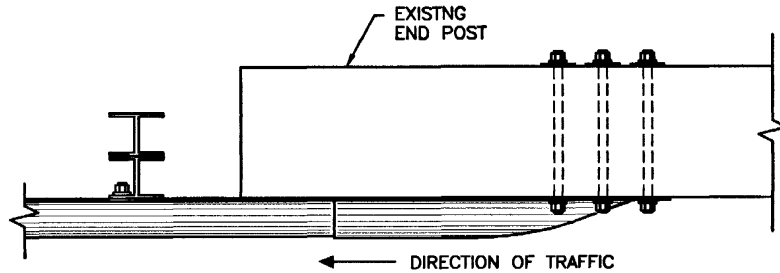
**ANCHORAGE DETAILS
TRAILING END SECTION**

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

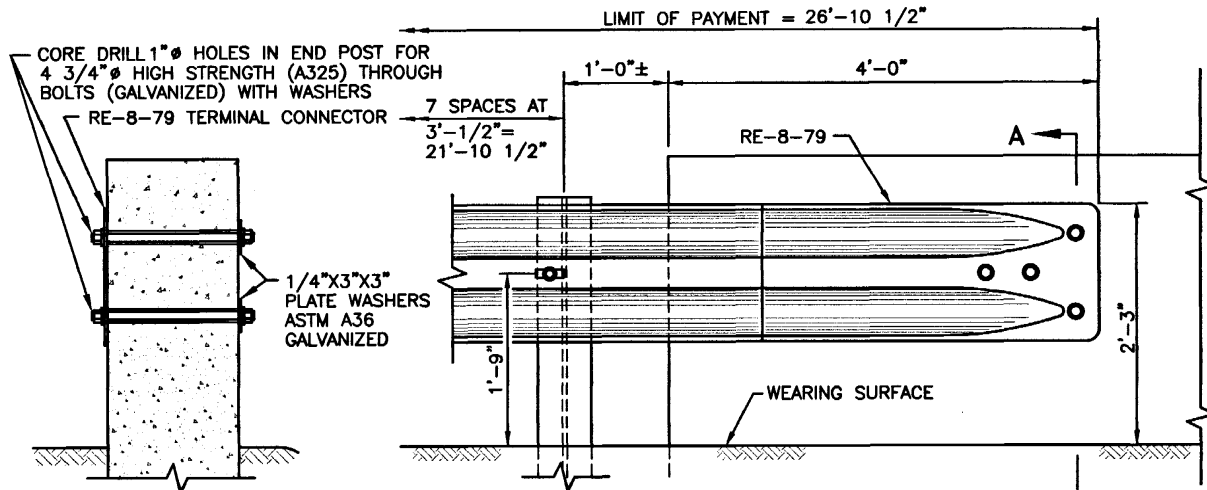
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

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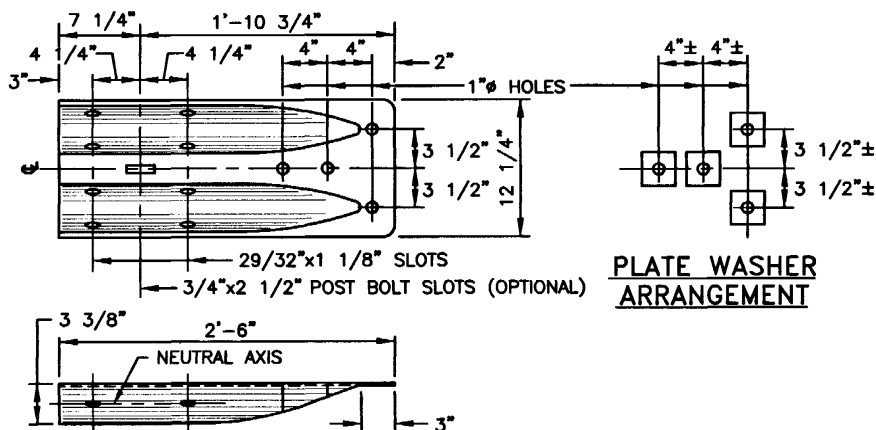




PLAN



ELEVATION



**TERMINAL CONNECTOR
(RE-8-79)**

**PLATE WASHER
ARRANGEMENT**

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**GUARDRAIL CONNECTION TO EXISTING END POST
APPROACH END SECTION**

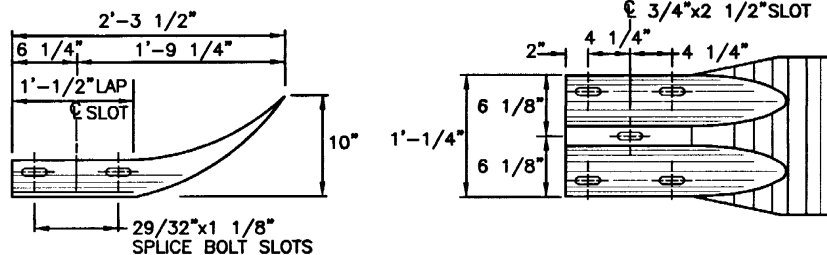
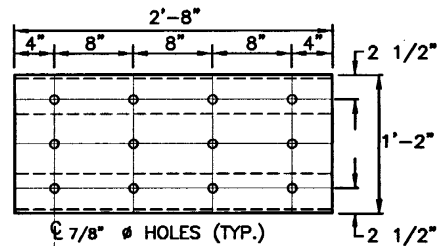
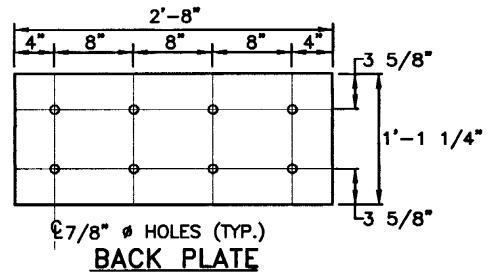
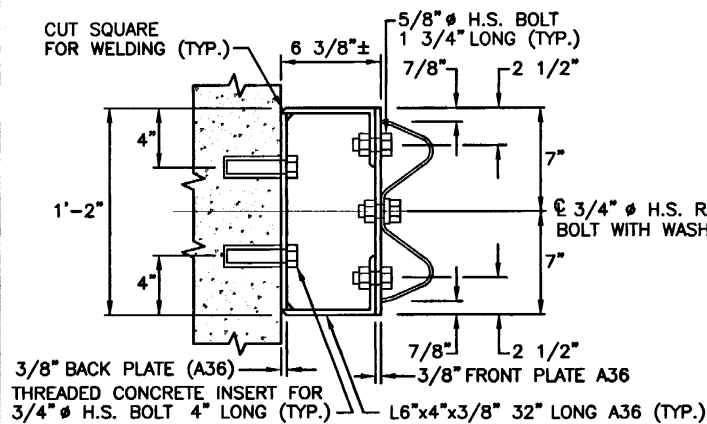
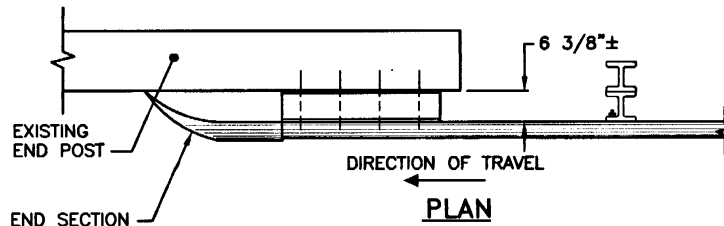
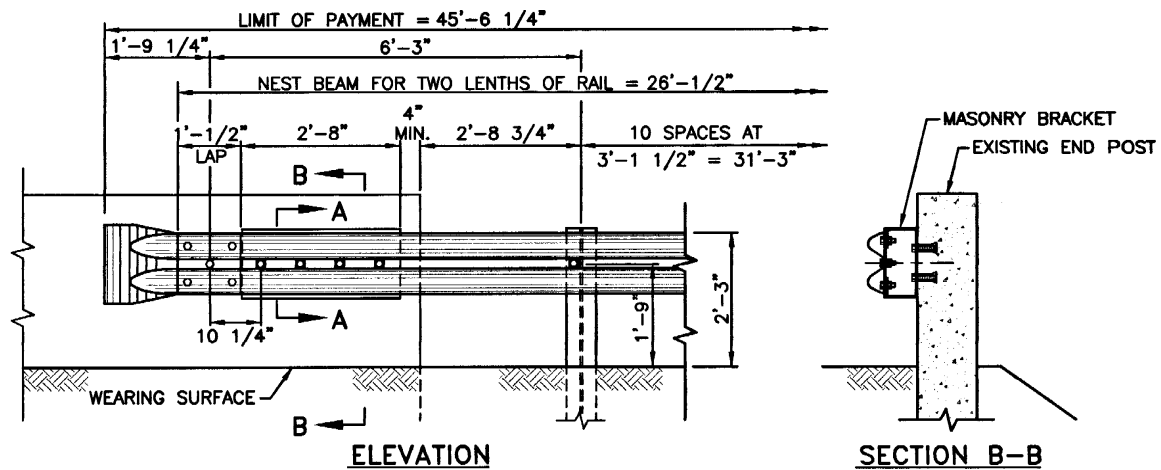
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CHIEF ENGINEER
TRANSPORTATION

Edward J. Parker Jr.
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TRANSPORTATION

JUNE 15, 1998
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NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. MASONRY BRACKET, END SECTION, GUARDRAIL, POSTS ALL HARDWARE, NUTS, BOLTS, WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. ALL STRUCTURAL SHAPES WHICH MAKE UP THE MASONRY BRACKET SHALL BE GALVANIZED.
4. FOR HIGH SPEED, UPGRADE TO THIER BEAM ESPECIALLY AT FIXED OBJECT LOCATIONS.
5. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARENCE, AND ACCEPTED MANUFACTURING PRACTICES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

GUARDRAIL CONNECTION TO EXISTING END POST TRAILING END SECTION

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NO. BY DATE

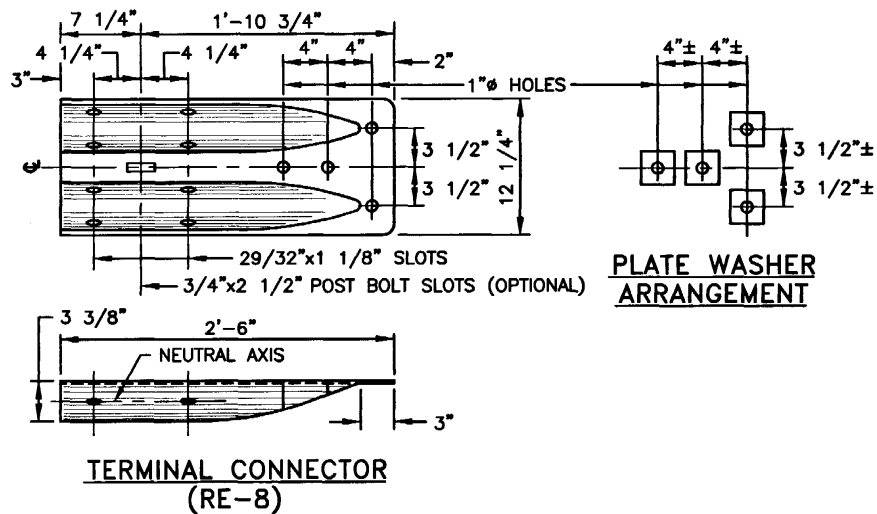
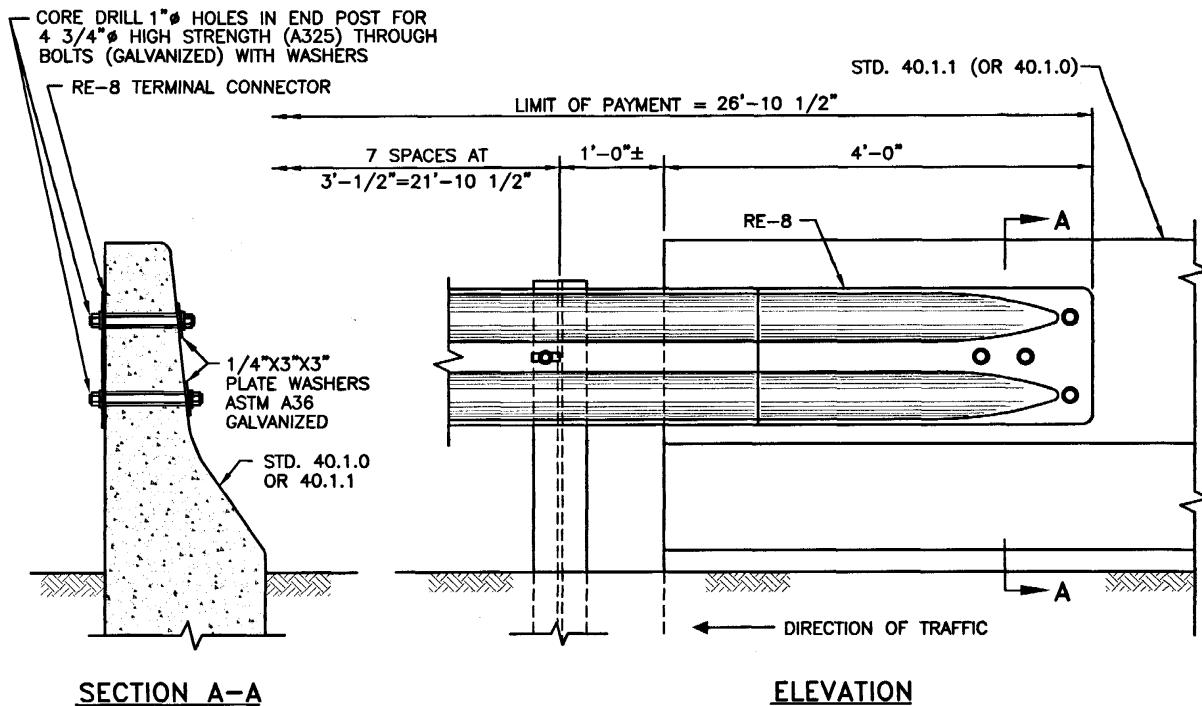
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TRANSPORTATION

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CHIEF DESIGN ENGINEER
TRANSPORTATION

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R.I.
STANDARD
34.3.6



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, HUTS, BOLTS, WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

GUARDRAIL CONNECTION TO BARRIER
APPROACH END SECTION

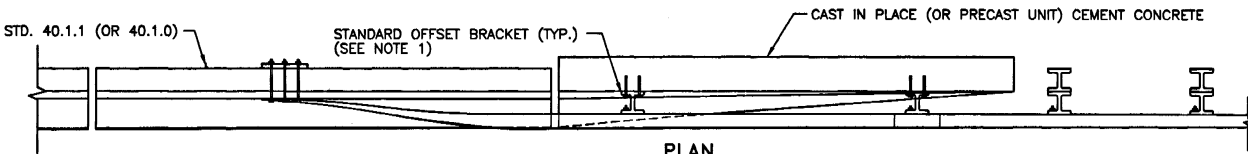
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James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

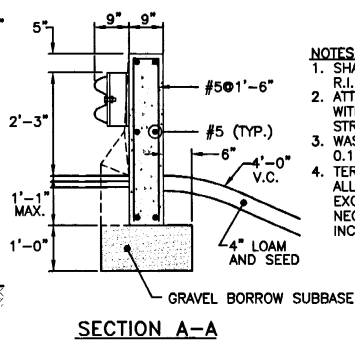
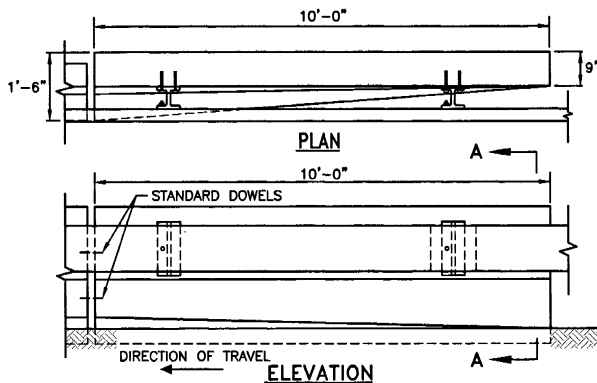
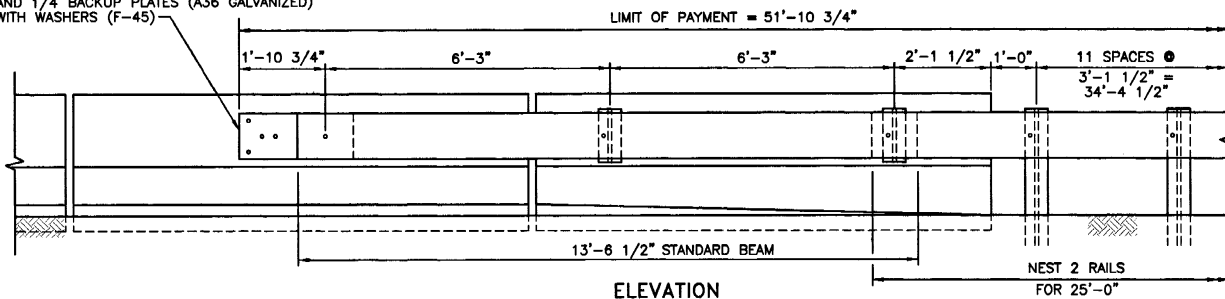
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TRANSPORTATION

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R.I.
STANDARD
34.3.7



"W" BEAM TERMINAL CONNECTOR RE-8 WITH
(4) 1/4" Ø HIGH STRENGTH BOLTS (A325 GALVANIZED)
AND 1/4" BACKUP PLATES (A36 GALVANIZED)
WITH WASHERS (F-45)



- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
 2. ATTACH EACH STANDARD OFFSET BRACKET TO BARRIER WITH 2 HIGH STRENGTH 3/4" Ø BOLTS AND THREADED STRUCTURAL CONCRETE INSERTS (A325 GALVANIZED).
 3. WASHERS (F-45) SHALL BE 1" I.D., 2" O.D. AND 0.134" THICK.
 4. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS, WASHERS DRILLING, EXCAVATION, CONCRETE AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
GUARDRAIL CONNECTION TO BARRIER
TRAILING END SECTION

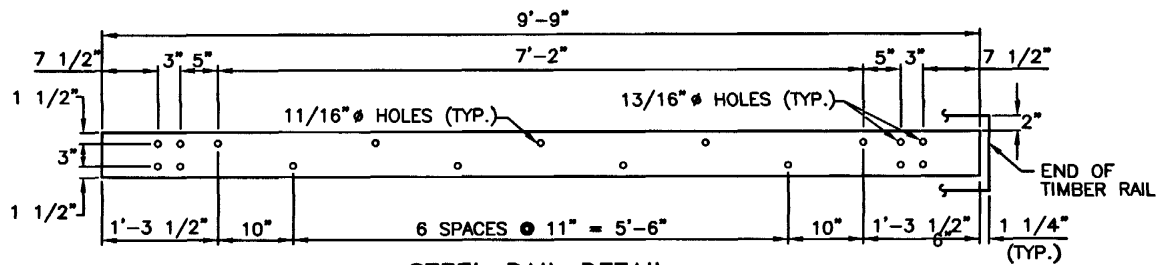
R.I.
STANDARD
34.3.8

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STEEL RAIL DETAIL
6"x3/8"x9'-9"

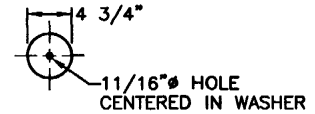
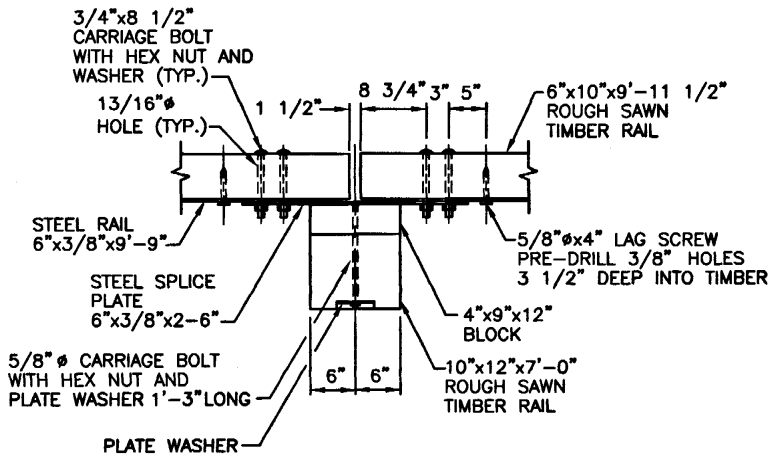
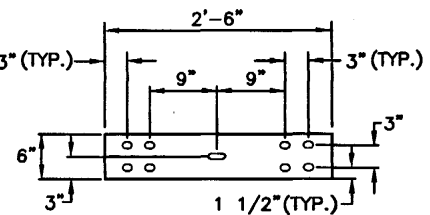


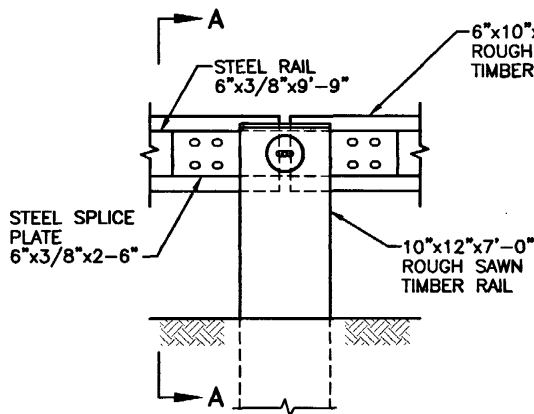
PLATE WASHER DETAIL
4 3/4"Øx1/4"



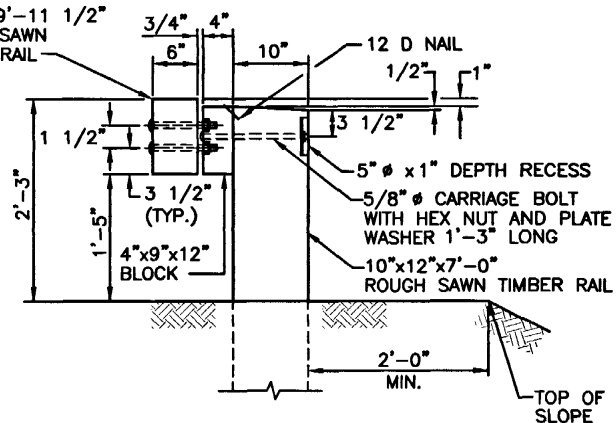
POST CONNECTION PLAN



STEEL SPLICE PLATE DETAIL
6"x3/8"x2'-6"



POST CONNECTION ELEVATION



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 900 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL STRUCTURAL STEEL AND FASTENER HARDWARE SHALL BE WEATHERING STEEL AS SPECIFIED.

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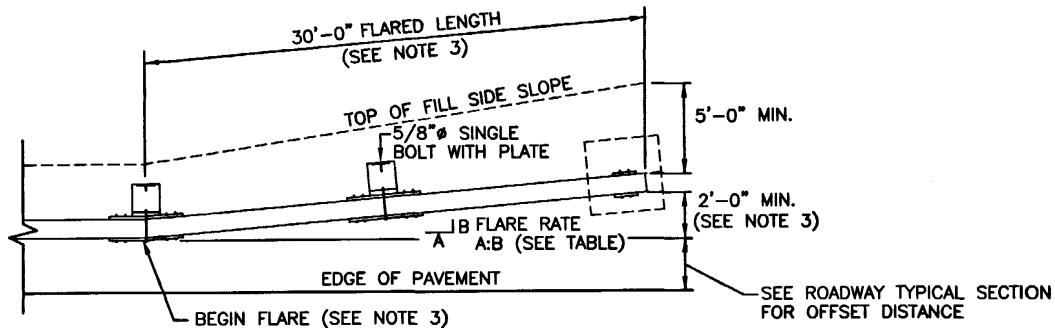
STEEL BACKED TIMBER GUARDRAIL

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TRANSPORTATION

Edward J. Parker
CHIEF DESIGN ENGINEER
TRANSPORTATION

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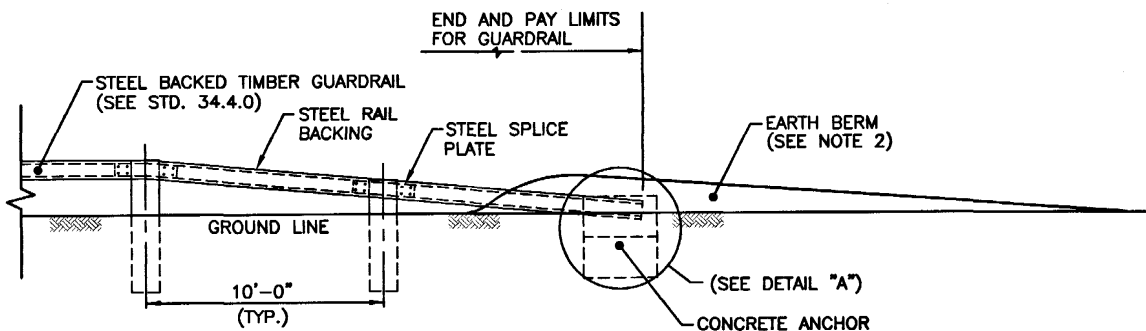




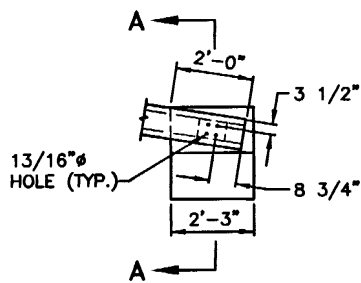
PLAN

DESIGN SPEED (MPH)	FLARE RATE A:B
60	13:1
50	11:1
40	9:1
30 OR LESS	7:1

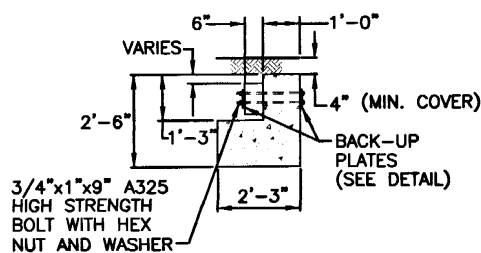
GUARDRAIL FLARE RATES



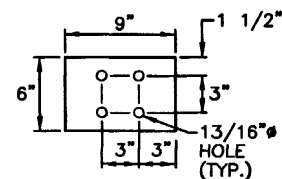
ELEVATION



DETAIL "A"



SECTION A-A



BACK-UP PLATE DETAIL
6"x1 1/2"x9"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 900 OF THE R.I. STANDARD SPECIFICATIONS.
2. REFERENCE STD. 34.3.0 FOR CONSTRUCTION OF EARTH BERM.
3. THE GUARDRAIL FLARE SHOWN IN THE PLAN VIEW IS THE MINIMUM LENGTH AND RATE REQUIRED. AS DIRECTED BY THE ENGINEER, THE GUARDRAIL SHOULD BE FLARED SO THE TERMINAL SECTION IS OUTSIDE THE CLEAR ZONE. WHEN THIS IS NOT PRACTICAL, IT SHOULD BE FLARED AS FAR FROM THE ROAD AS PRACTICAL AT THE MAXIMUM RATE INDICATED ON THE GUARDRAIL FLARE RATE TABLE.
4. REFERENCE STD. 34.4.0 FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.
5. THE BLOCKS SHALL BE INCLUDED IN THE TERMINAL SECTION, EXCEPT ON THE CONCRETE ANCHOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

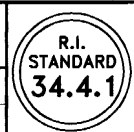
STEEL BACKED TIMBER GUARDRAIL
TERMINAL SECTION - TYPE 1

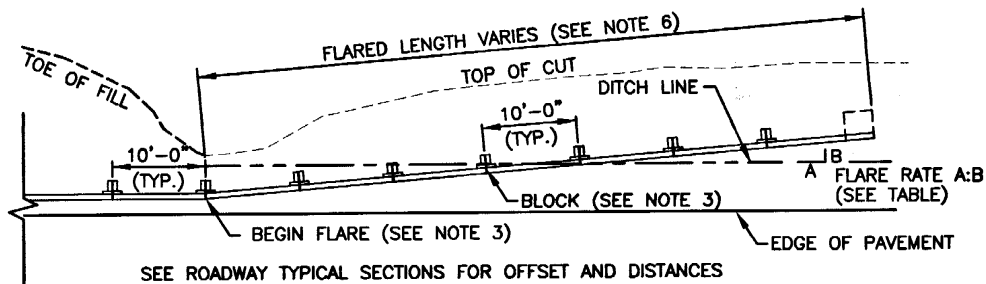
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TRANSPORTATION

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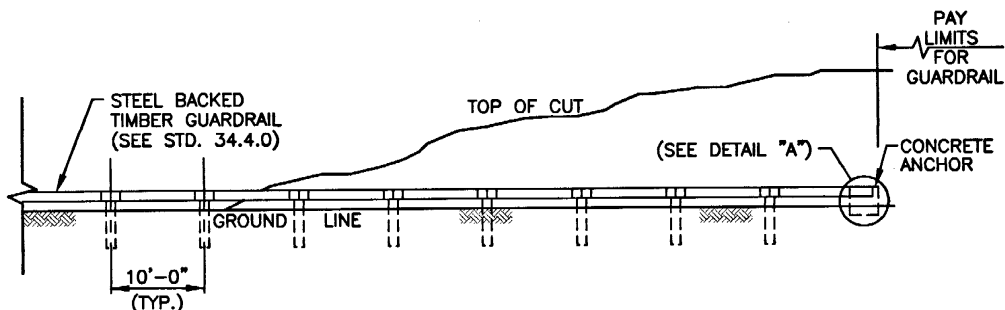




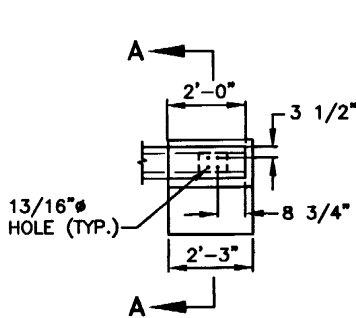
PLAN

DESIGN SPEED (MPH)	FLARE RATE A:B
40	9:1
30OR LESS	7:1

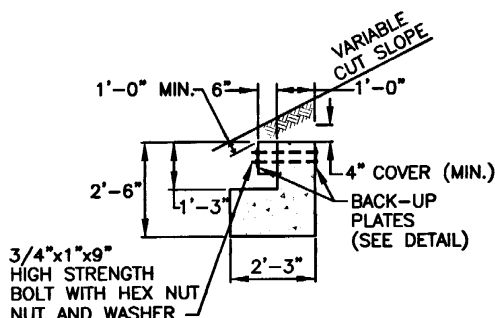
GUARDRAIL FLARE RATES



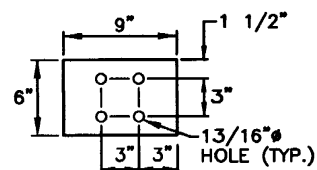
ELEVATION



DETAIL "A"



SECTION A-A



BACK-UP PLATE

DETAIL

6"x1 1/2"x9"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 900 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD IS NOT TO BE USED WHEN THE DESIGN SPEED EXCEEDS 45 MPH.
3. SEE STD. 34.4.0 STEEL BACKED TIMBER GUARDRAIL, FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.
4. THE BLOCKS SHALL BE INCLUDED IN THE TERMINAL SECTION, EXCEPT ON THE CONCRETE ANCHOR.
5. CUT FLARES SHALL BEGIN AT THE NEAREST POST TO A TRANSITION POINT BETWEEN FILL AND CUT AS DIRECTED BY THE ENGINEER.
6. THE FLARE SHALL BE EXTENDED INTO THE CUT UNTIL A MINIMUM OF 1'-0" COVER IS OBTAINED OVER THE GUARDRAIL END.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**STEEL BACKED TIMBER GUARDRAIL
TERMINAL SECTION - TYPE 2**

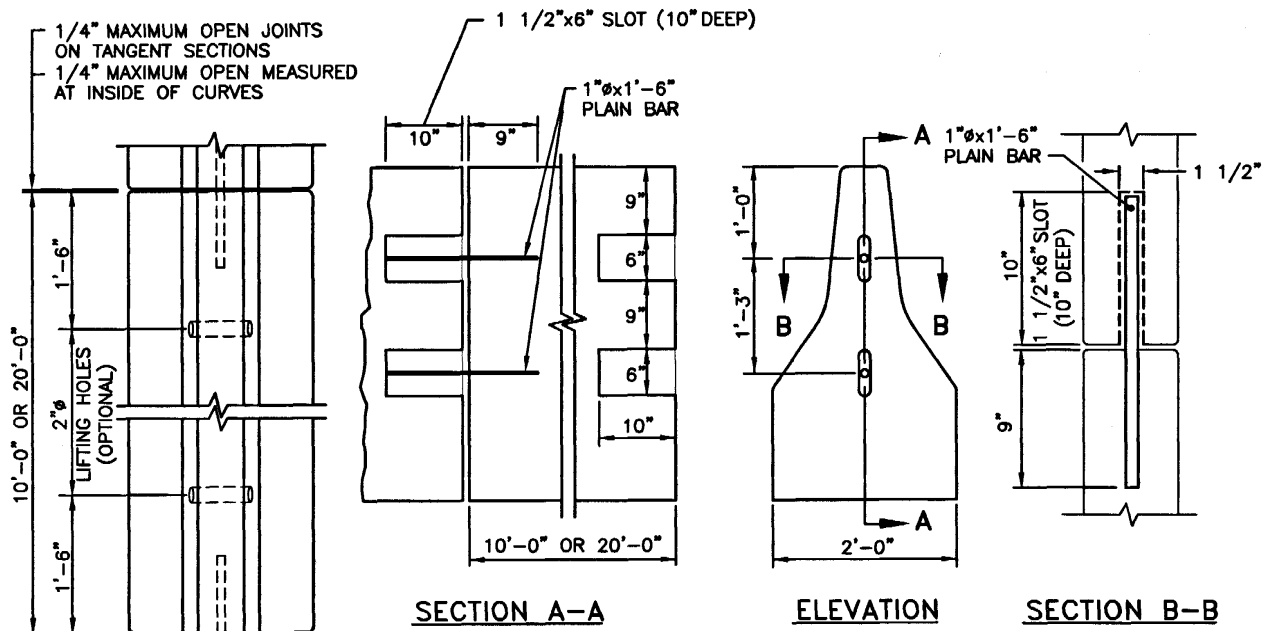
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TRANSPORTATION

Edward J. Parker Jr.
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TRANSPORTATION

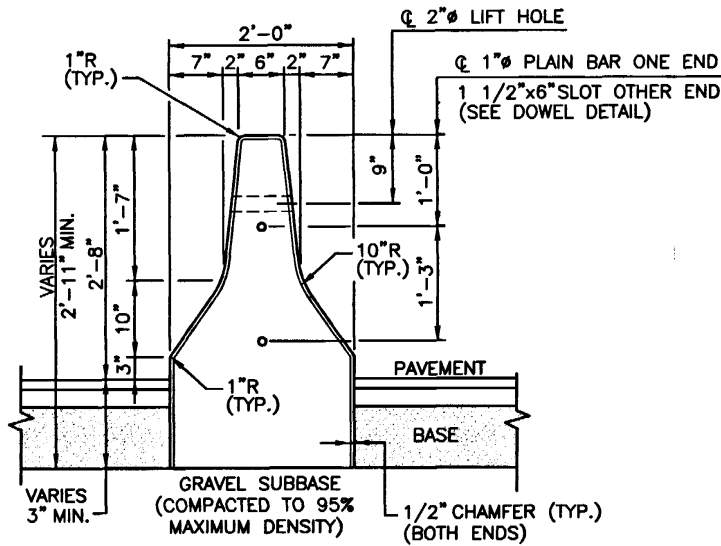
JUNE 15, 1998
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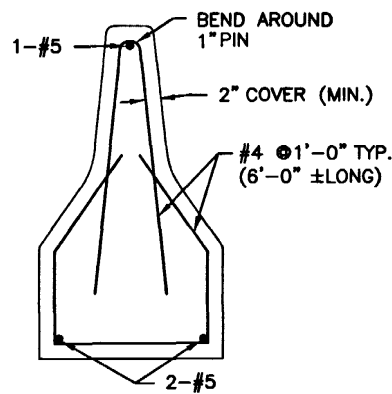


PLAN

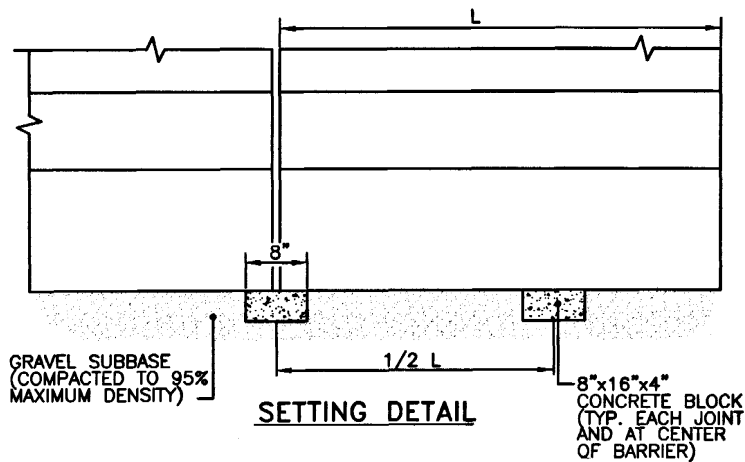
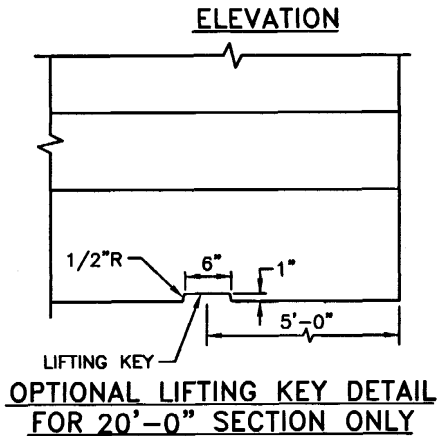
DOWEL DETAIL AT ENDS



ELEVATION



REINFORCING



NOTE: SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

DOUBLE-FACED PRECAST MEDIAN BARRIER

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John A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edward J. Park
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
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R.I.
STANDARD
40.1.0

SECTION A-A

ELEVATION

SECTION B-B

DETAIL "A"

REINFORCING

ELEVATION

PLAN

NOTES:

- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.
2. UNIT SHALL BE SUPPORTED BY CONCRETE SETTING BLOCKS (SEE STD. 40.1.0).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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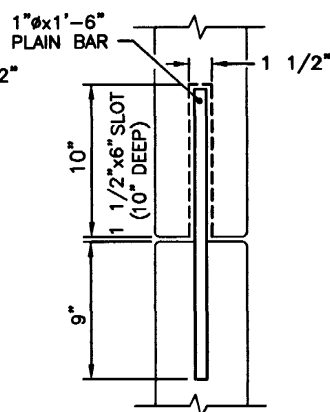
SINGLE-FACED PRECAST MEDIAN BARRIER

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Edward J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

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STANDARD
40.2.0**



SECTION B-B

10'-0"

1'-6"

2" ϕ

LIFTING HOLES (OPTIONAL)

1'-6"

1/4" MAXIMUM OPEN JOINTS ON TANGENT SECTIONS

1/4" MAXIMUM OPEN MEASURED AT INSIDE OF CURVES

1-#5

BEND AROUND 1" PIN

2" COVER (MIN.)

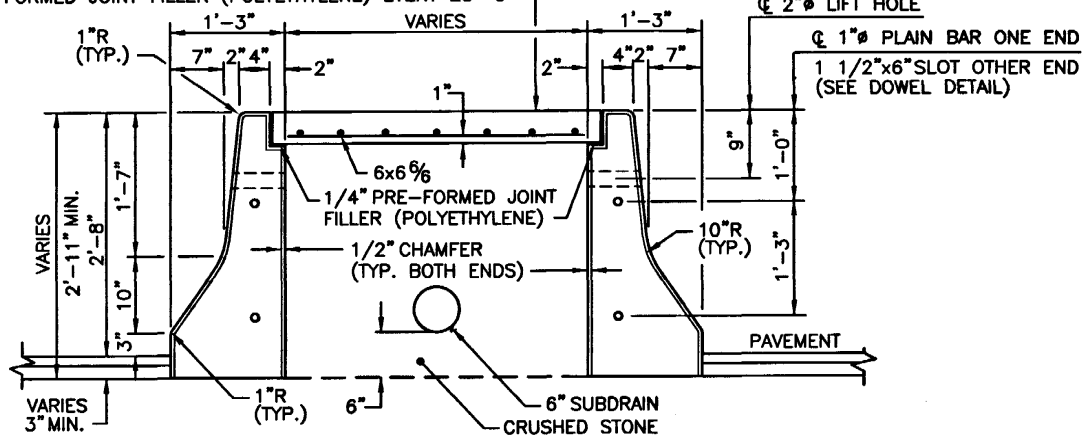
#4 1'-0" TYP. (6'-0" ±LONG)

2-#5

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.
2. UNIT SHALL BE SUPPORTED BY CONCRETE SETTING BLOCKS (SEE STD. 40.1.0).
3. SUBDRAIN SHALL BE TIED INTO THE DRAINAGE SYSTEM.

4" CAST IN PLACE CEMENT CONCRETE WITH EXPANSION JOINTS AND
1/4" PRE-FORMED JOINT FILLER (POLYETHYLENE) EVERY 25'-0" \square



ELEVATION

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SINGLE-FACED PRECAST MEDIAN BARRIER

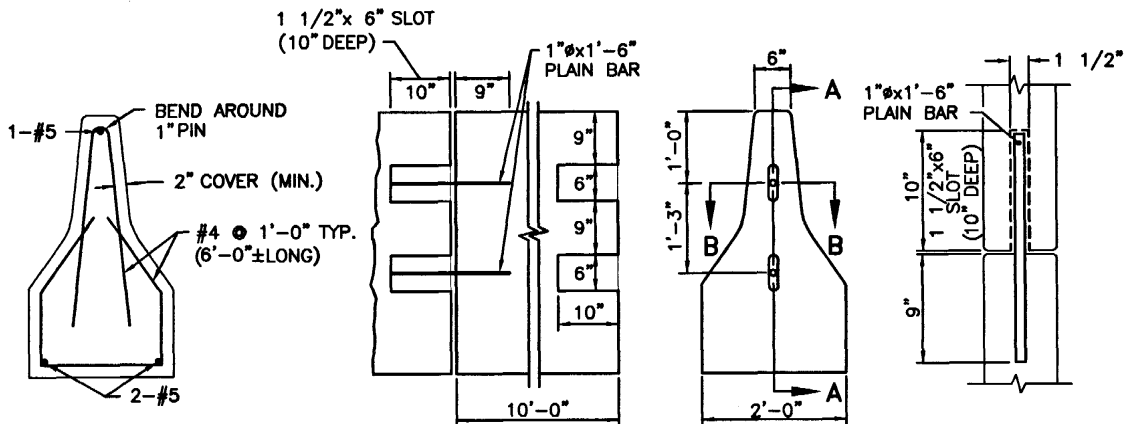
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STANDARD
40.2.1**



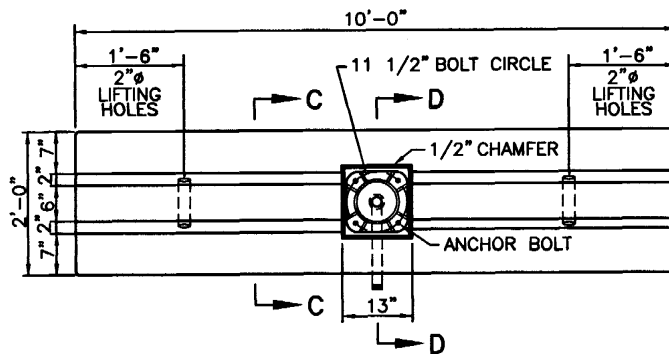
REINFORCING

SECTION A-A

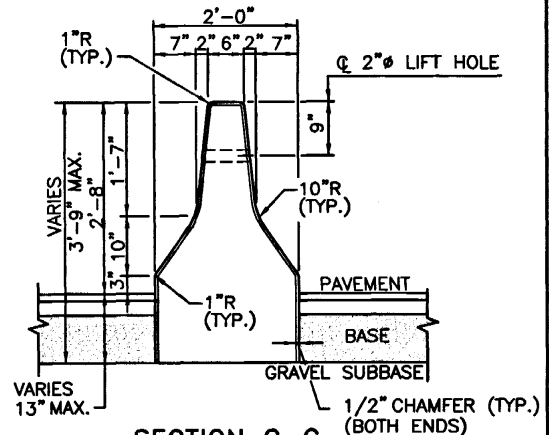
ELEVATION

SECTION B-B

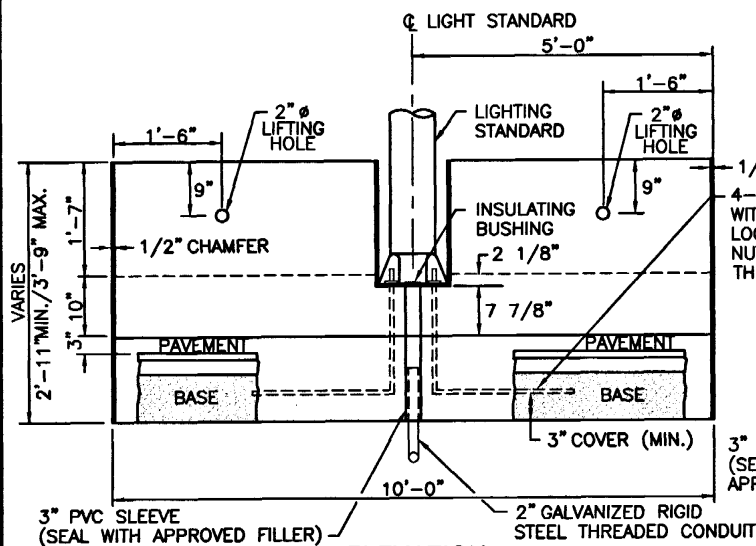
DOWEL DETAIL AT ENDS



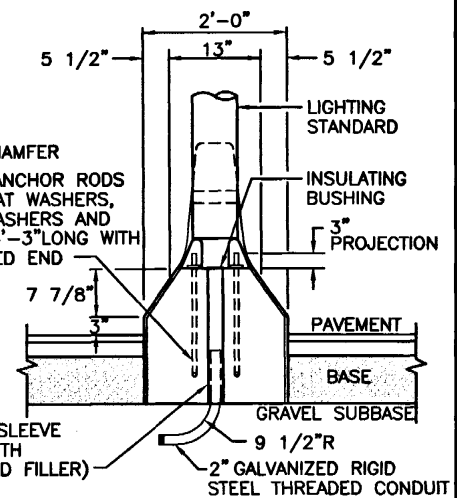
PLAN



SECTION C-C



ELEVATION



SECTION D-D

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST MEDIAN BARRIER FOR LIGHT STANDARD

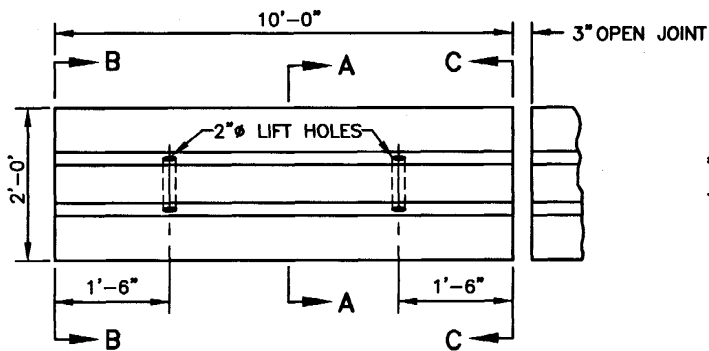
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TRANSPORTATION

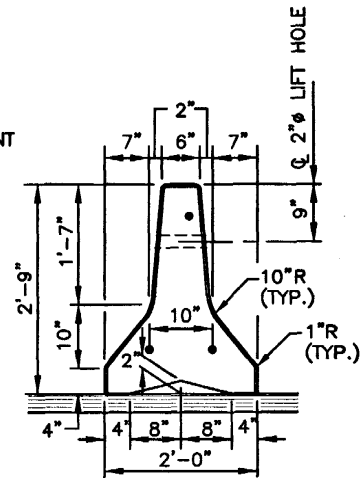
Edward J. P. [Signature]
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
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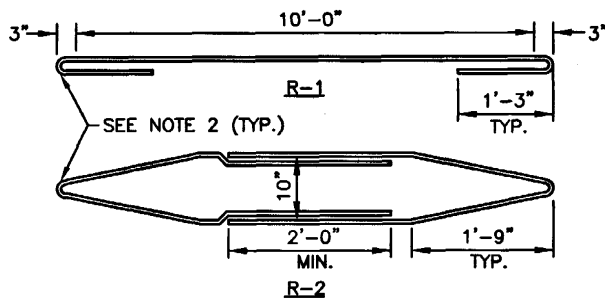
R.I.
STANDARD
40.4.0



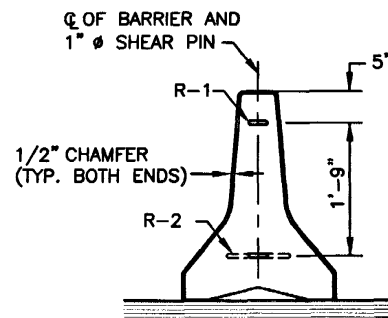
PLAN



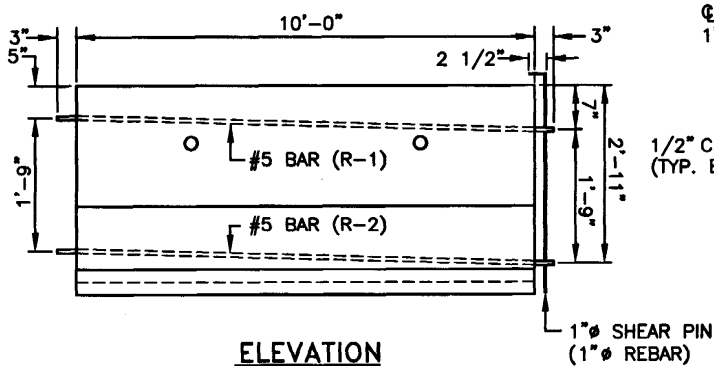
SECTION A-A



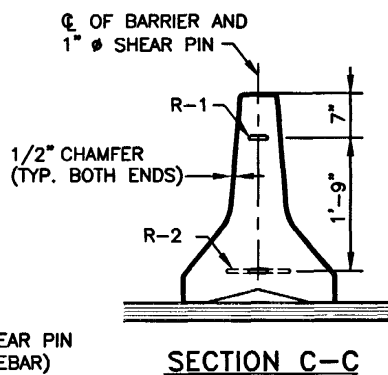
REINFORCING BAR DETAIL



SECTION B-B



ELEVATION



SECTION C-C

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 926 OF THE R.I. STANDARD SPECIFICATIONS.
2. BEND REBARS AROUND A 1 3/8" Ø PIN.
3. BARS R-1 SHALL BE FABRICATED CONTINUOUSLY. R-2 BARS SHALL BE FABRICATED WITH 2'-0" MINIMUM LAPS AS SHOWN ON THE DETAIL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST MEDIAN BARRIER
FOR TEMPORARY TRAFFIC CONTROL

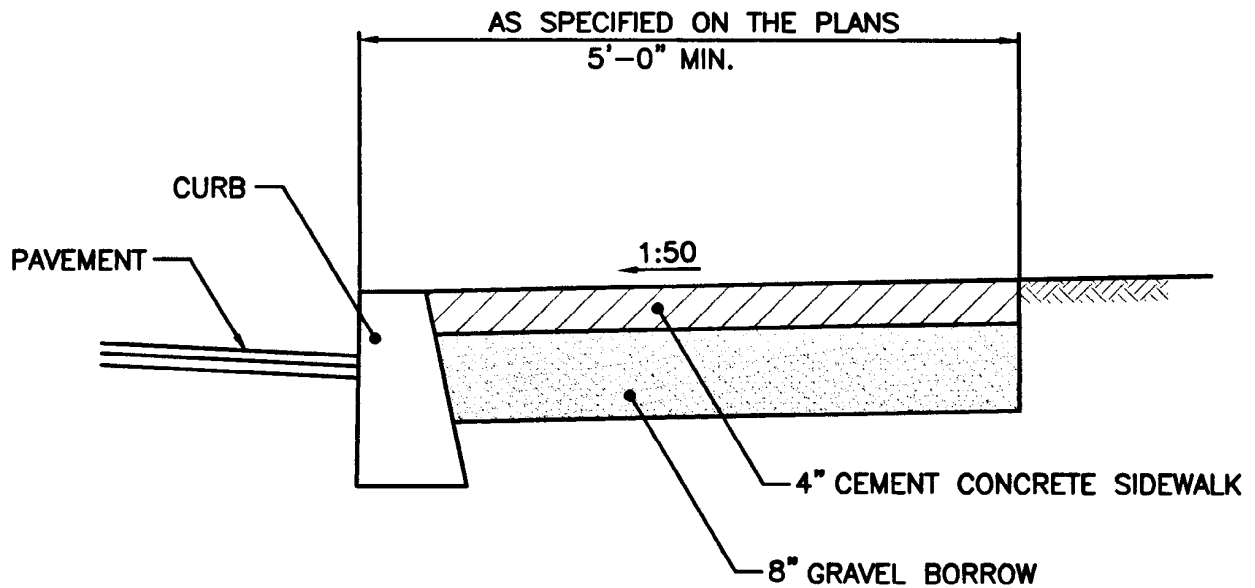
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TRANSPORTATION

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JUNE 15, 1998
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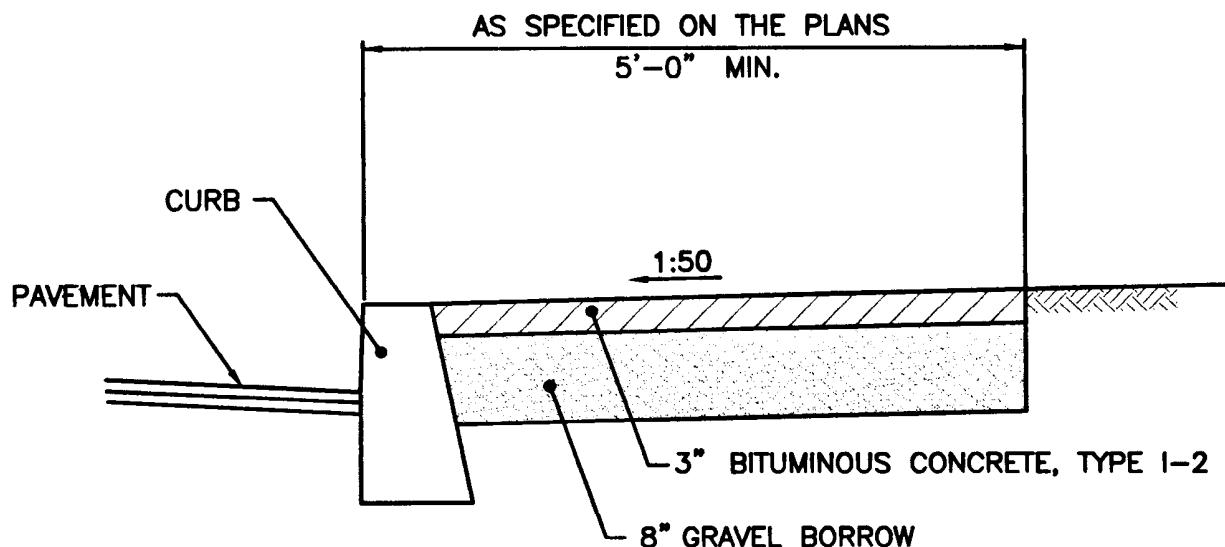


NOTES

1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			CEMENT CONCRETE SIDEWALK	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 43.1.0 </div>
NO.	BY	DATE		
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION
			JUNE 15, 1998 ISSUE DATE	

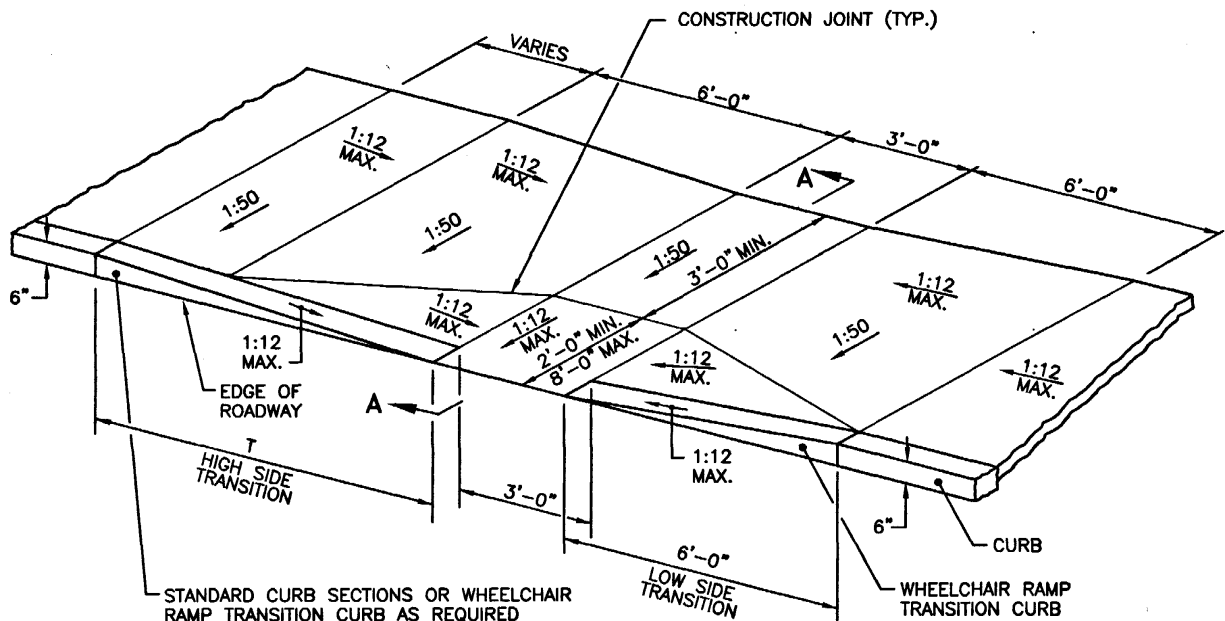


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

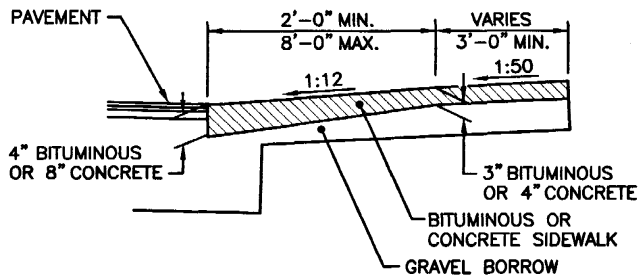
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BITUMINOUS CONCRETE SIDEWALK	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 43.2.0 </div>
NO.	BY	DATE		
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>	



ISOMETRIC VIEW
NOT TO SCALE

ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
9. WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.

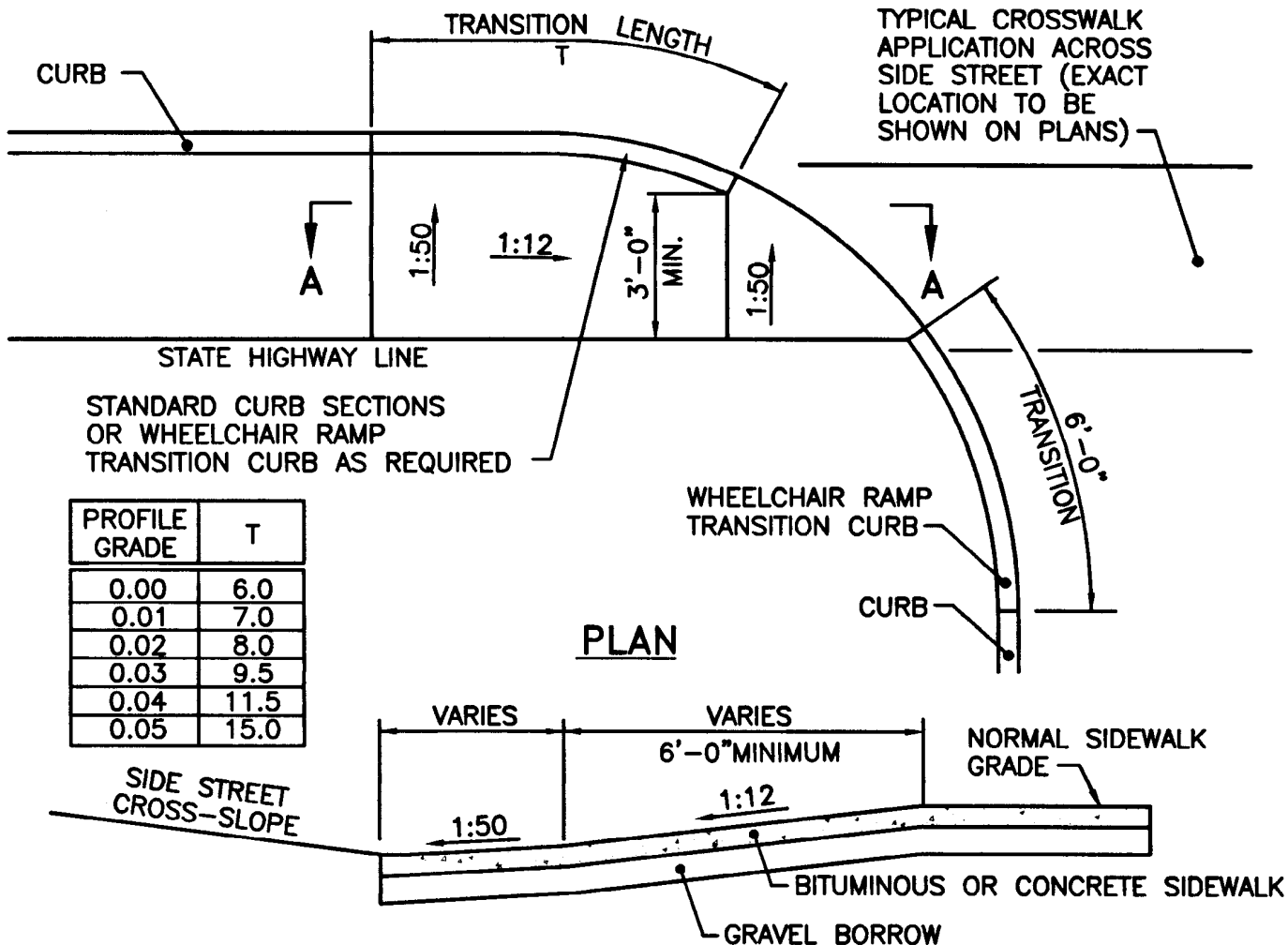
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			WHEELCHAIR RAMP		<div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> R.I. STANDARD 43.3.0 </div>
NO.	BY	DATE			

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edward R. Ruffalo
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT-OF-WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
3. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION WILL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
4. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
5. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
6. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
7. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
8. WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
11. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.

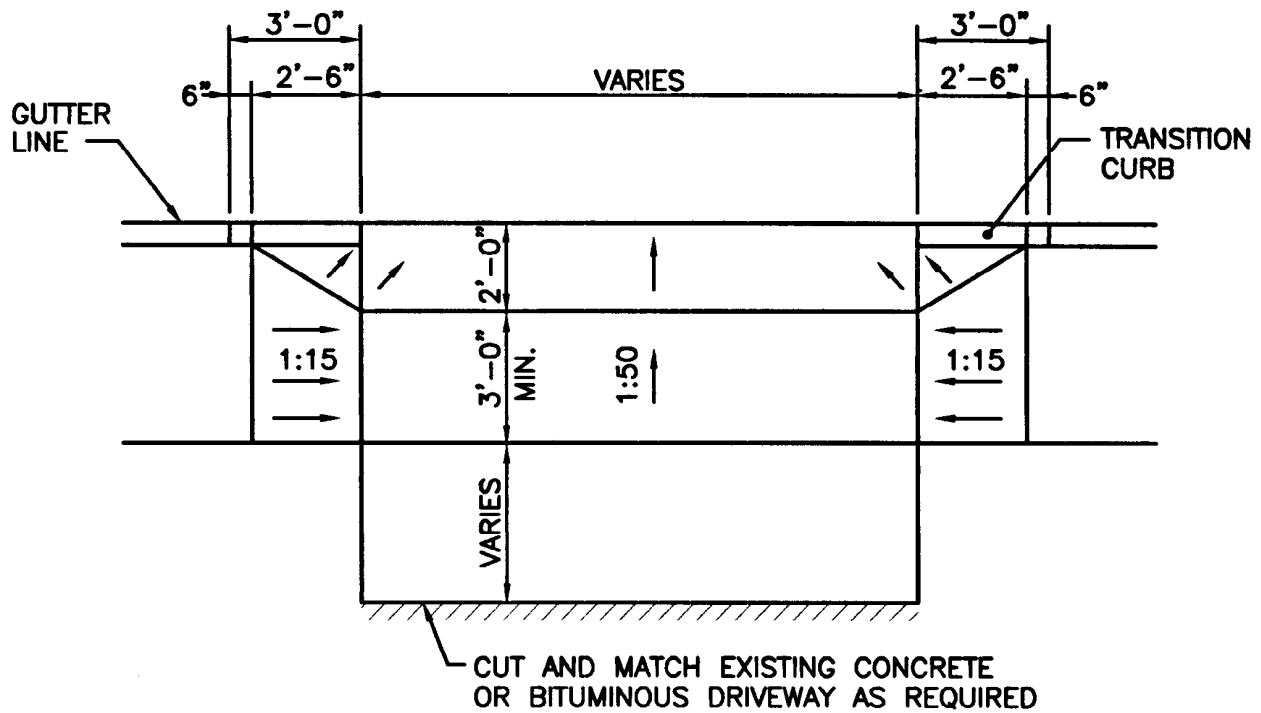
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS		R.I. STANDARD 43.3.1
NO.	BY	DATE			

CHIEF ENGINEER
 TRANSPORTATION

CHIEF DESIGN ENGINEER
 TRANSPORTATION

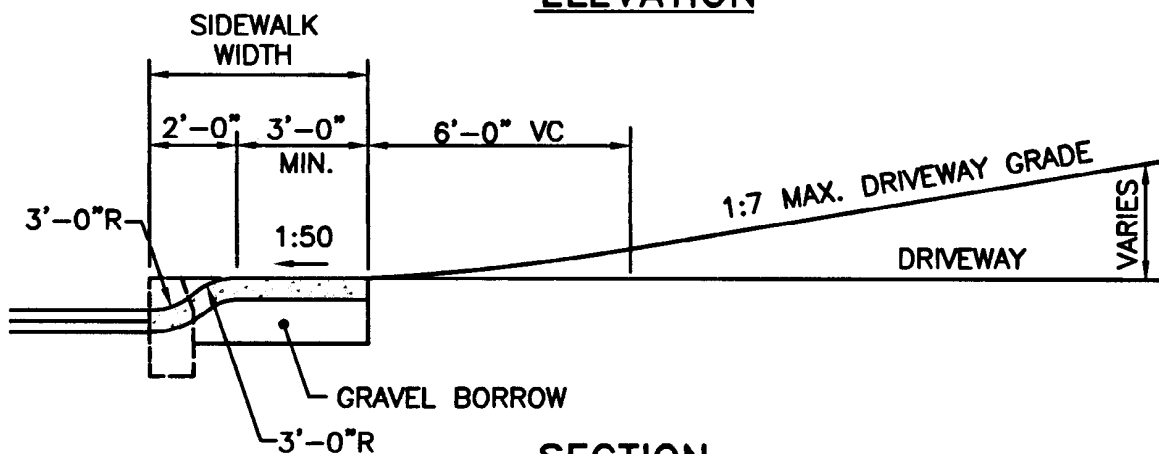
JUNE 15, 1998
 ISSUE DATE



PLAN



ELEVATION



SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN DRIVEWAY IS BELOW BACK EDGE OF SIDEWALK PROFILE, STD. 43.4.1 MUST BE USED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

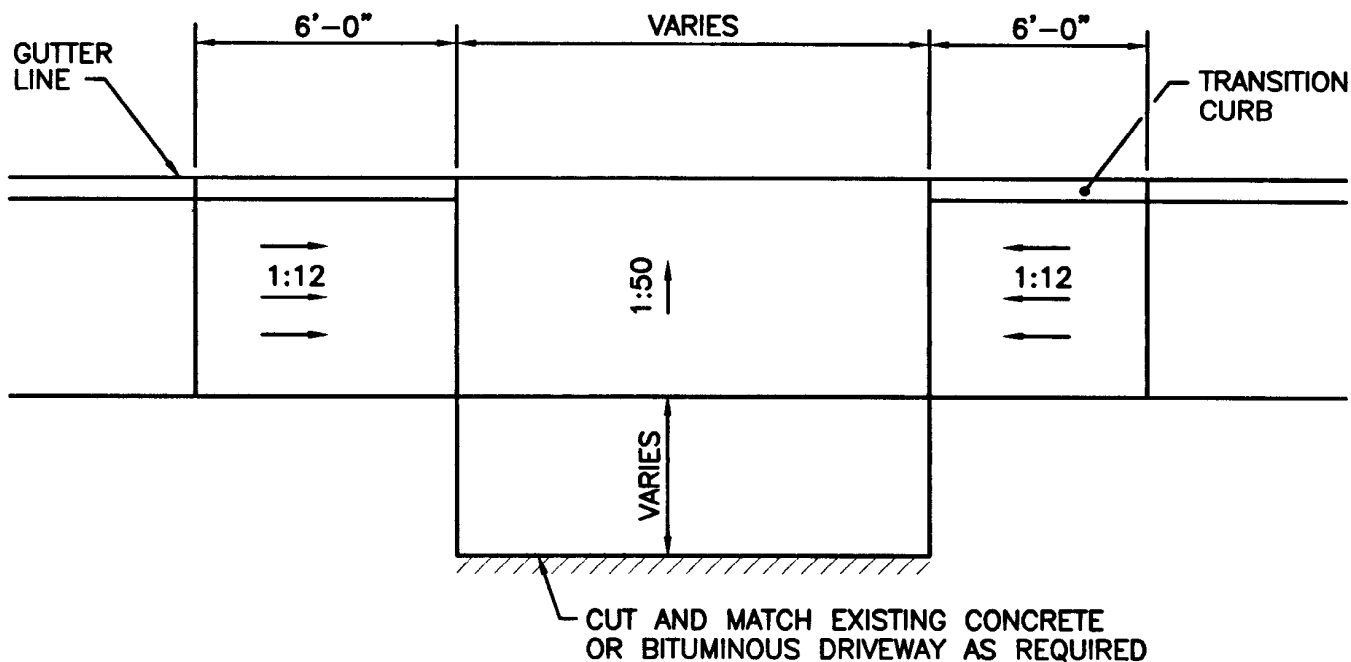
DRIVEWAY DEVELOPMENT FOR
3'-0" TRANSITION CURB

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

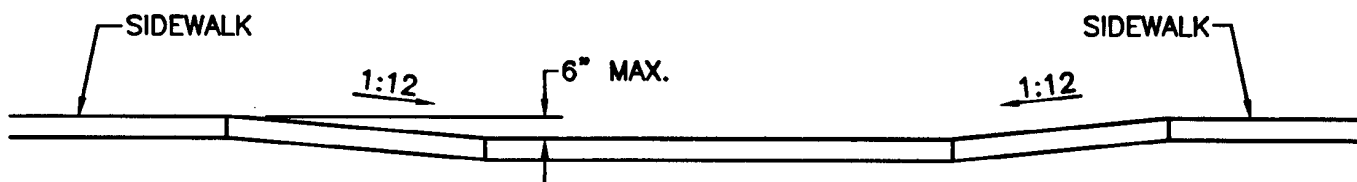
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

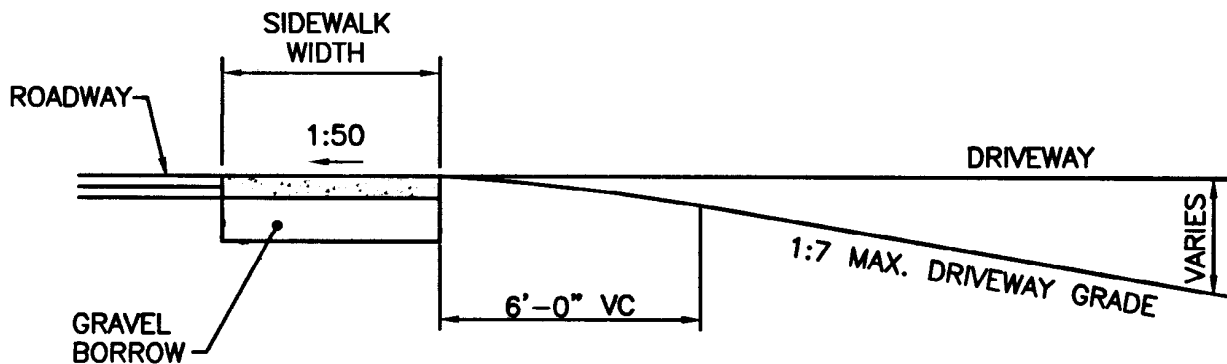




PLAN



ELEVATION



SECTION

NOTE:

SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**DRIVEWAY DEVELOPMENT FOR
6'-0" TRANSITION CURB**

REVISIONS		
NO.	BY	DATE

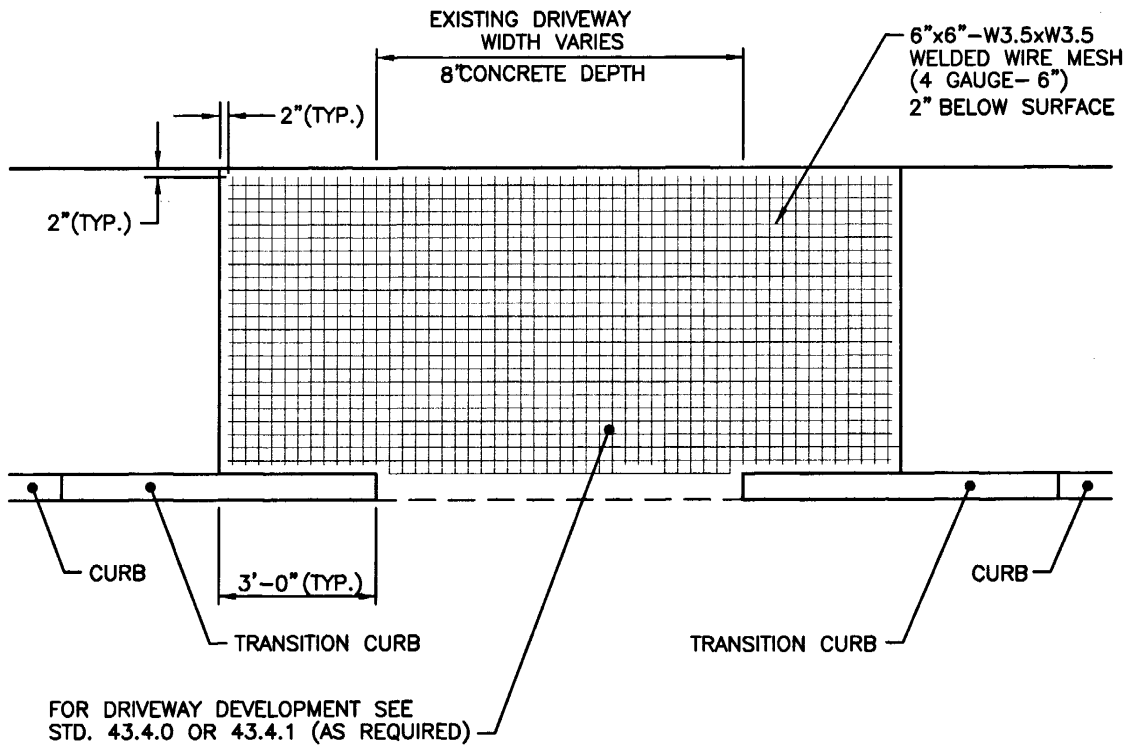
James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.



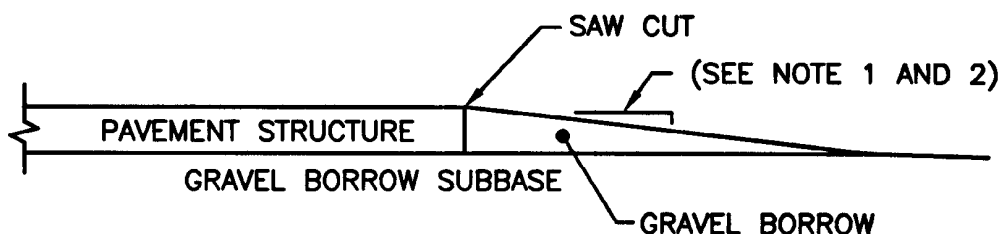
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CEMENT CONCRETE DRIVEWAYS

REVISIONS		
NO.	BY	DATE

CHIEF ENGINEER
TRANSPORTATION
James H. Gault
CHIEF DESIGN ENGINEER
TRANSPORTATION
Edward M. Kelly
JUNE 15, 1998
ISSUE DATE



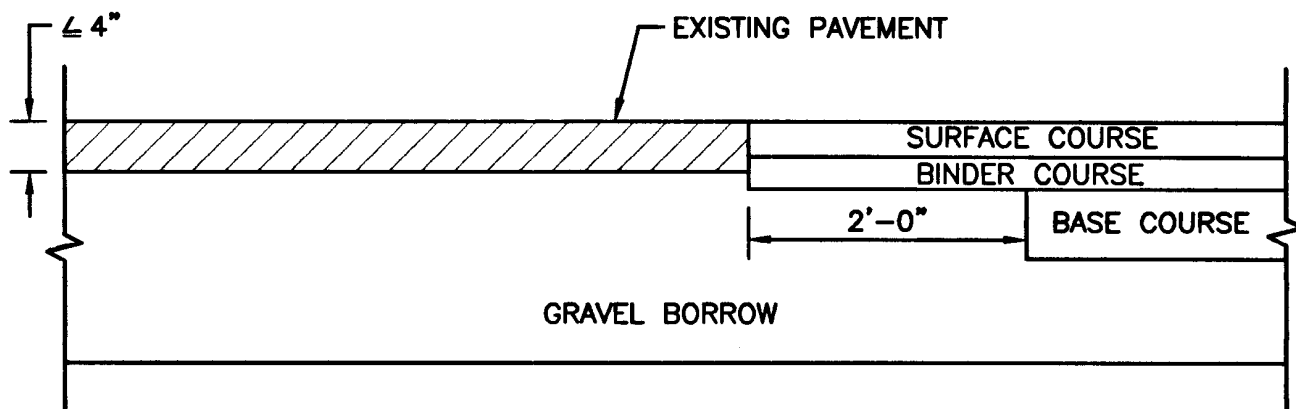


NOTES:

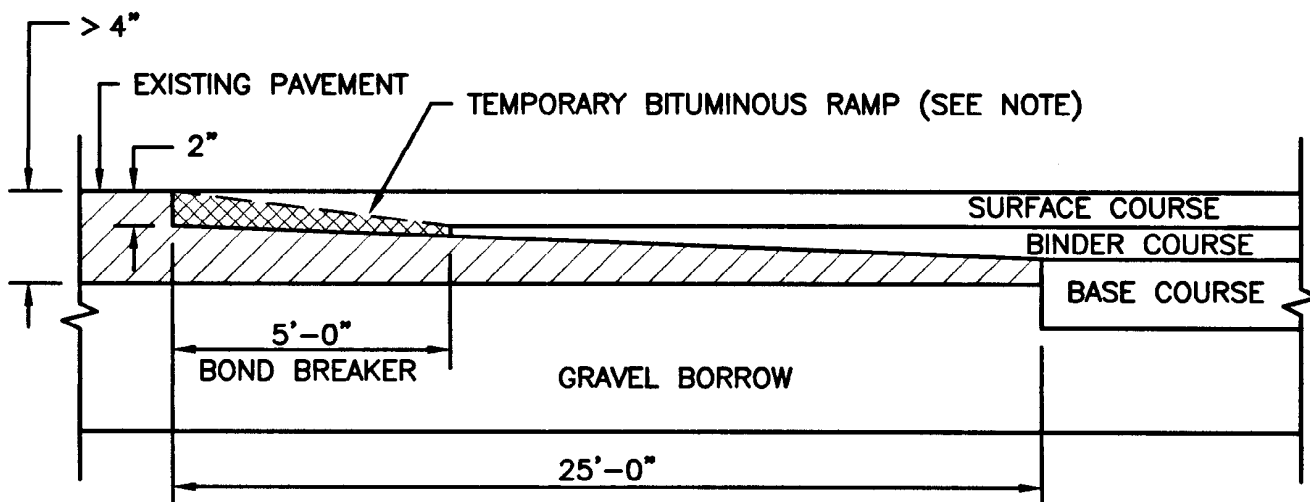
1. TRANSVERSE DROP-OFF:
 POSTED SPEED \leq 35 M.P.H.: 5 FEET HORIZONTALLY TO 1 INCH VERTICALLY
 POSTED SPEED $>$ 35 M.P.H.: 10 FEET HORIZONTALLY TO 1 INCH VERTICALLY
2. LONGITUDINAL DROP-OFF (OUTSIDE EDGES OF PAVEMENT):
 POSTED SPEED \leq 35 M.P.H.: DROP-OFFS $>$ 3" BUT $<$ 5" SHALL BE TAPERED TO A 1:1 OR FLATTER SLOPE TO EXISTING GROUND.
 ALL DROP-OFFS \geq 5" SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.
 POSTED SPEED $>$ 35 M.P.H.: LONGITUDINAL DROP-OFFS WILL NOT BE PERMITTED WITHIN 2'-0" OF A TRAVEL LANE. THIS AREA MUST BE AT GRADE WITH THE TRAVEL LANE. HOWEVER, SHOULD THE CONTRACTOR'S APPROVED SEQUENCE OF OPERATIONS RESULT IN OVERNIGHT DROP-OFFS GREATER THAN THREE INCHES OCCURRING BETWEEN 2'-0" TO 6'-0" FROM A TRAVEL LANE, THEN THE DROP-OFFS SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PAVEMENT REMOVAL DROP-OFF DETAIL	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; width: 100px; margin: 0 auto;"> R.I. STANDARD 47.1.0 </div>
NO.	BY	DATE		
			<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> JUNE 15, 1998 <small>ISSUE DATE</small> </div> </div>	



EXISTING PAVEMENT DEPTH $\leq 4''$



EXISTING PAVEMENT DEPTH $> 4''$

NOTE:

A BOND BREAKER (TAPERED OR EQUIVALENT) WILL BE PLACED 5'-0" FROM THE JOINT AND COVERED WITH THE BINDER COURSE AS THE TEMPORARY RAMP. PRIOR TO PLACING THE SURFACE COURSE, THE BINDER COURSE AND BOND BREAKER WILL BE REMOVED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

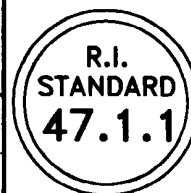
REVISIONS		
NO.	BY	DATE

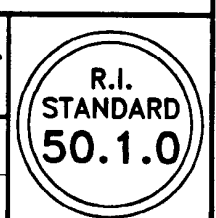
**TRANSVERSE PAVEMENT
CUT AND MATCH**

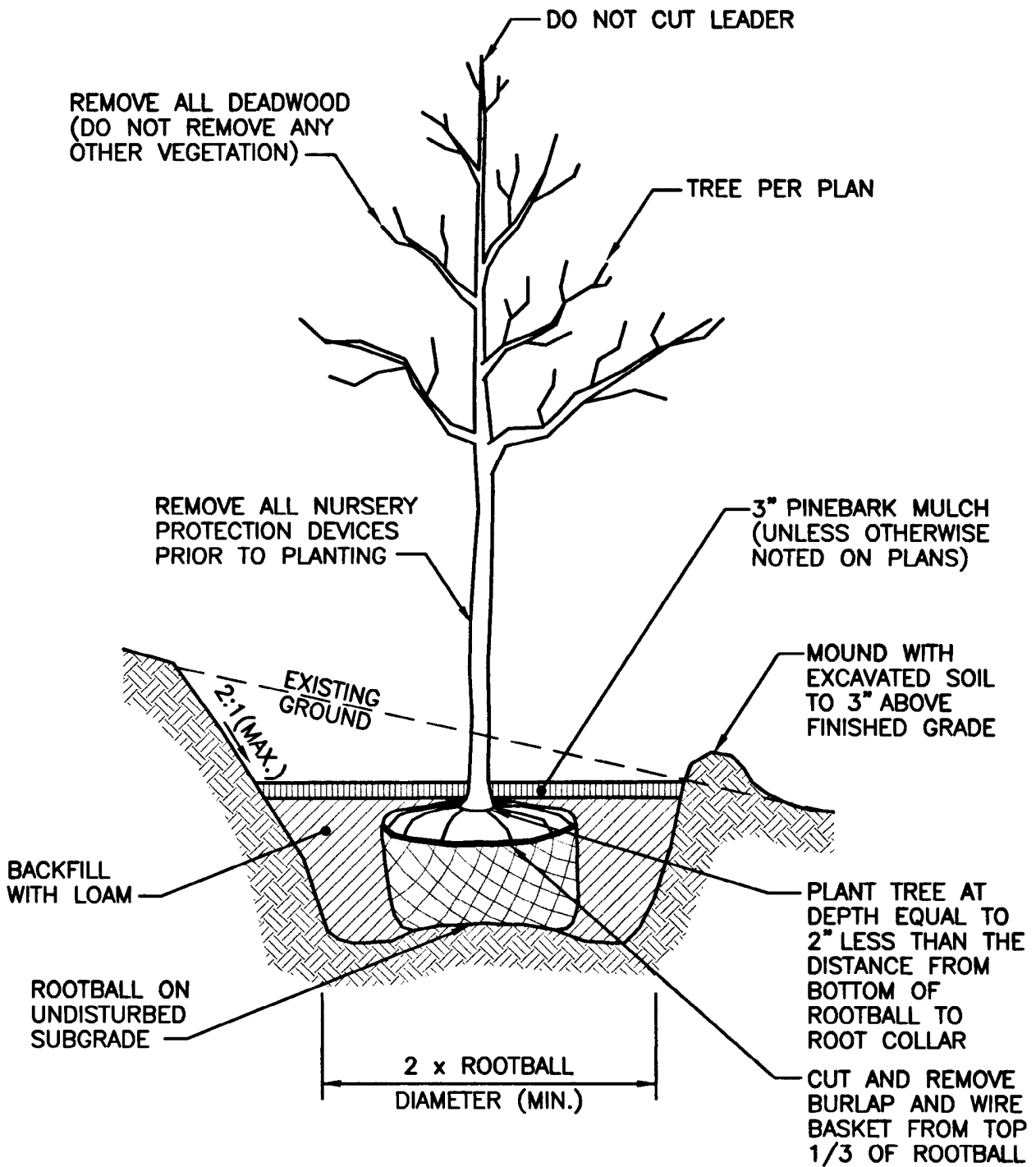
James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE







NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR STAKING DETAIL SEE STD. 50.1.0

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TREE PLANTING ON SLOPE

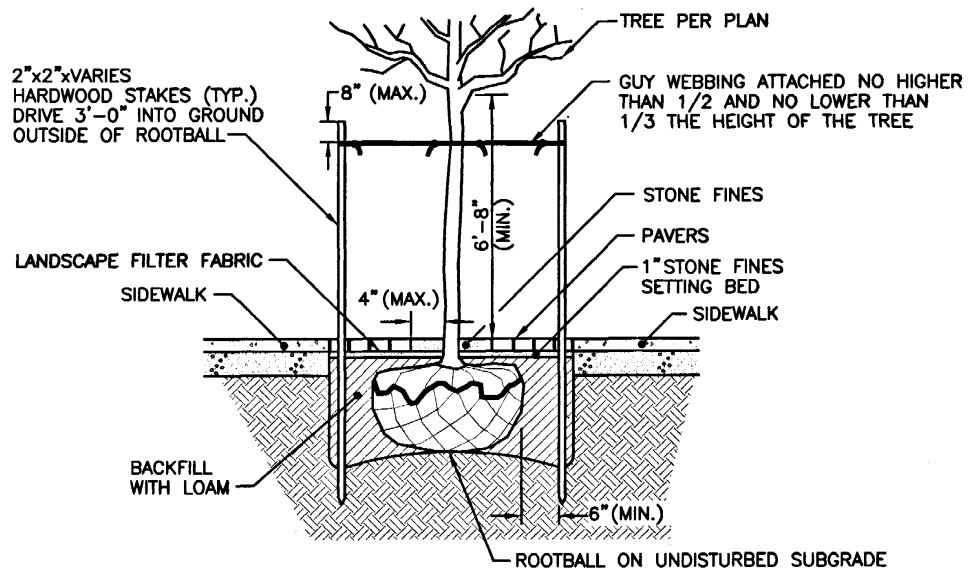
REVISIONS		
NO.	BY	DATE

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

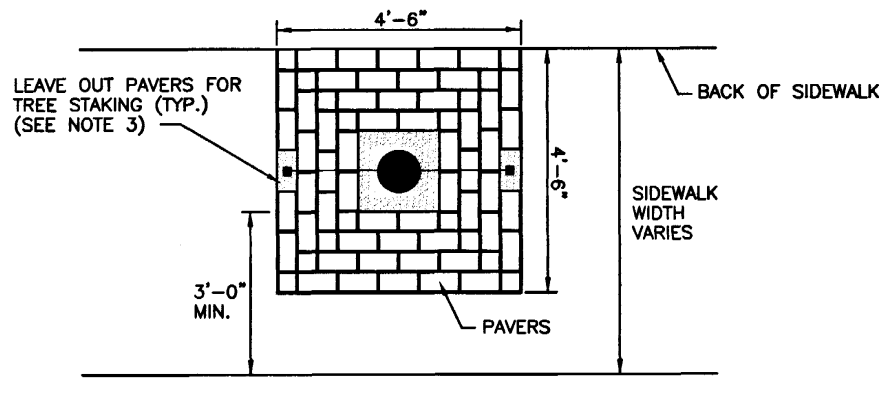
Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

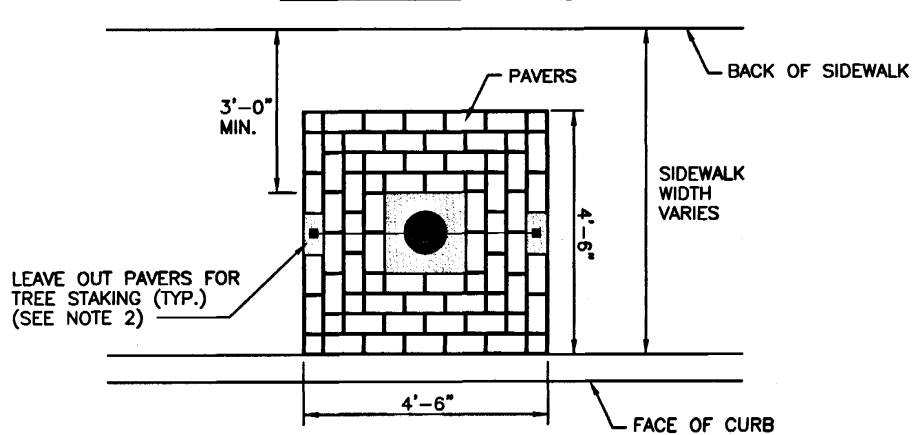




SECTION



BACK OF SIDEWALK



BACK OF CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTIONS L.06 AND L.12 OF THE R.I. STANDARD SPECIFICATIONS.
2. STAKES SHOULD BE LOCATED PARALLEL TO ROAD AND SIDEWALK.
3. AFTER THE GUARANTEE PERIOD THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF STAKES AND GUY WEBBING, AND FOR THE INSTALLATION OF PAVERS PREVIOUSLY LEFT OUT FOR STAKING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PAVER DETAIL AROUND NEW TREES

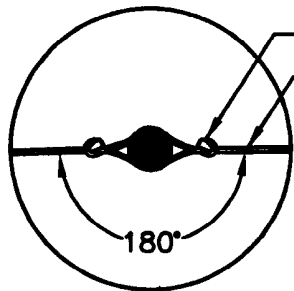
REVISIONS		
NO.	BY	DATE

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

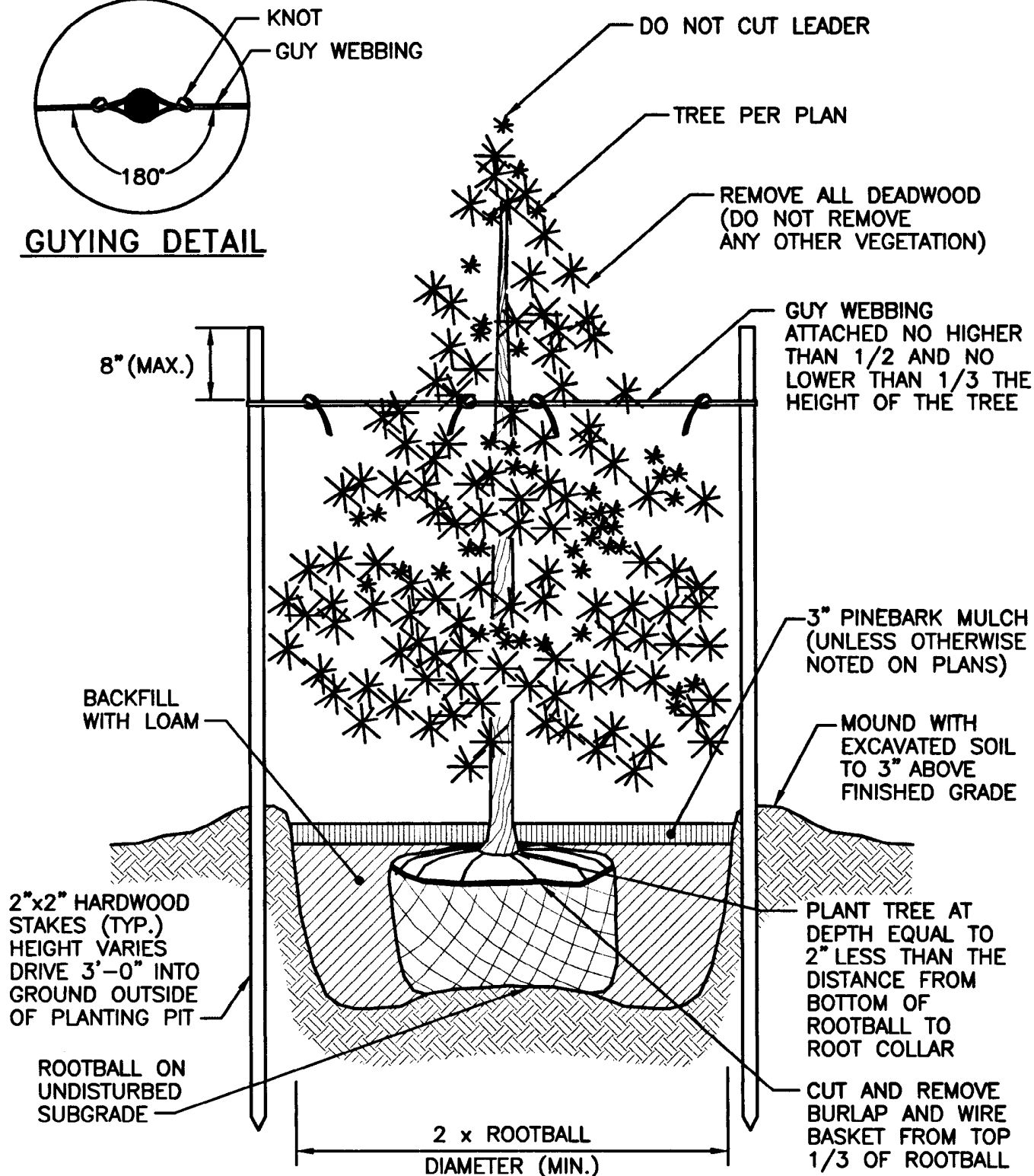
Edward J. Petherick
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





GUYING DETAIL



NOTE:

SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

EVERGREEN TREE PLANTING DETAIL (4'-0" HIGH AND GREATER)

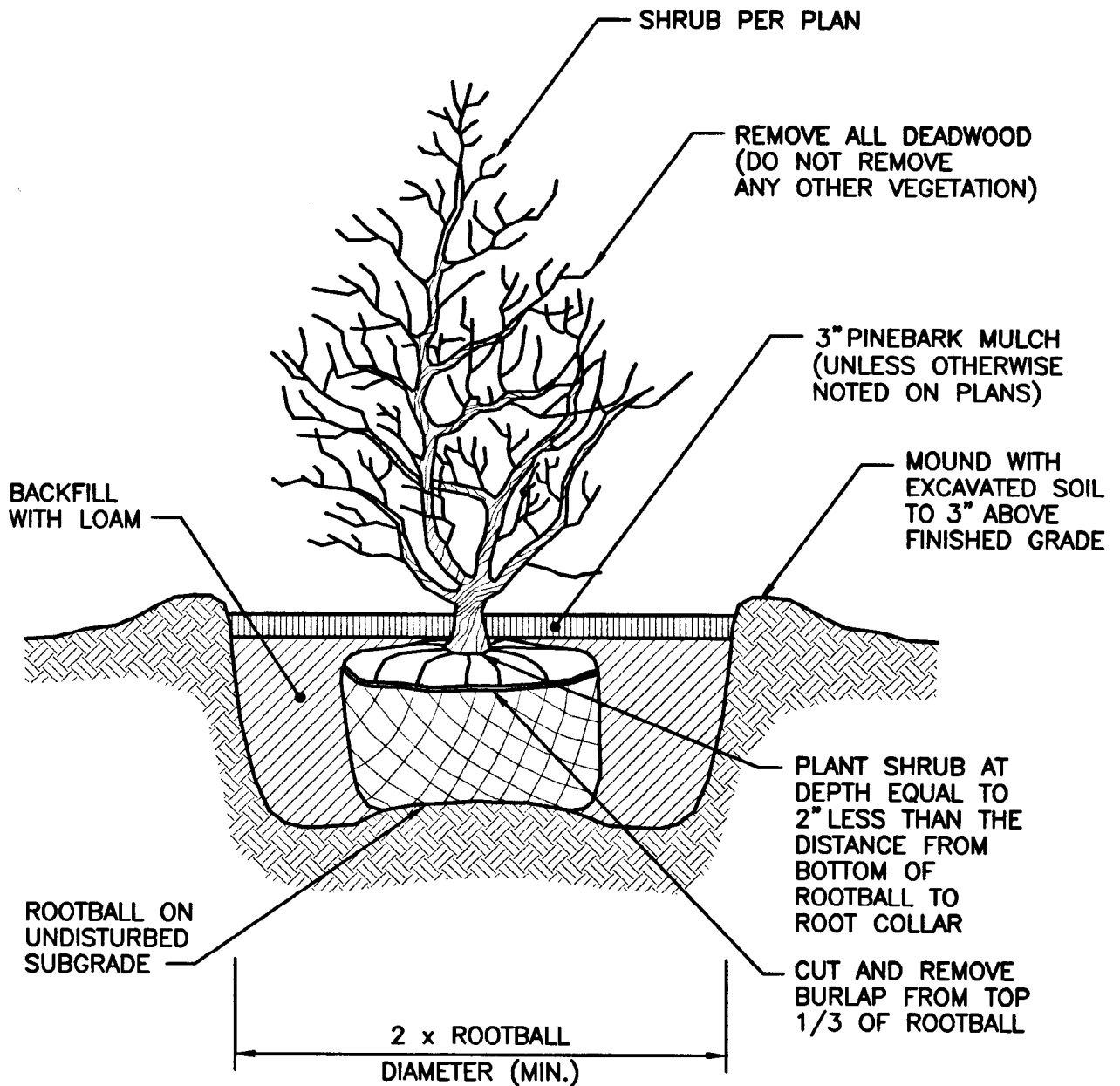
REVISIONS		
NO.	BY	DATE

James A. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
50.2.0



NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BALL AND BURLAP SHRUB PLANTING DETAIL

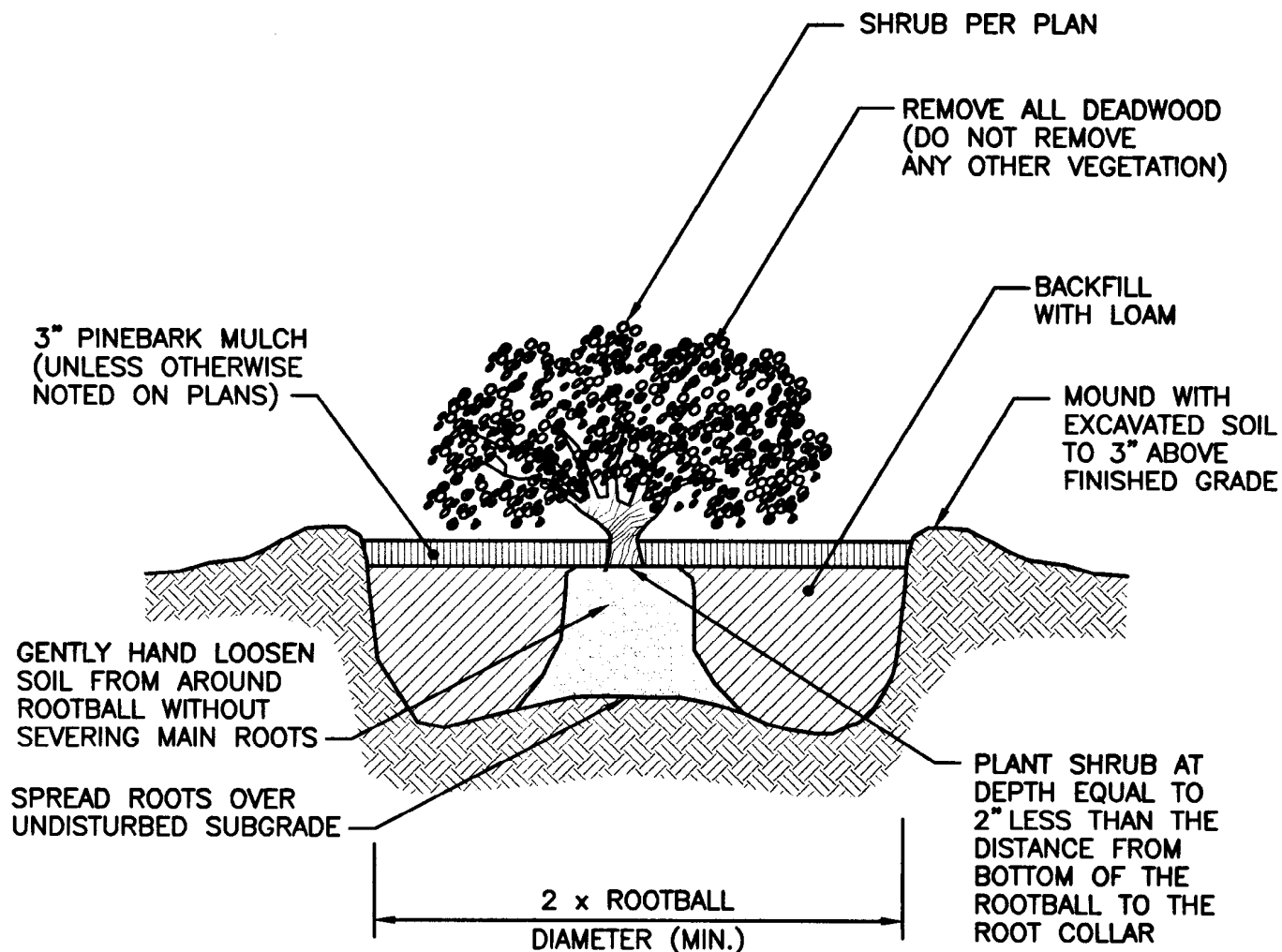
REVISIONS		
NO.	BY	DATE

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTE:

SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**CONTAINER GROWN
SHRUB PLANTING DETAIL**

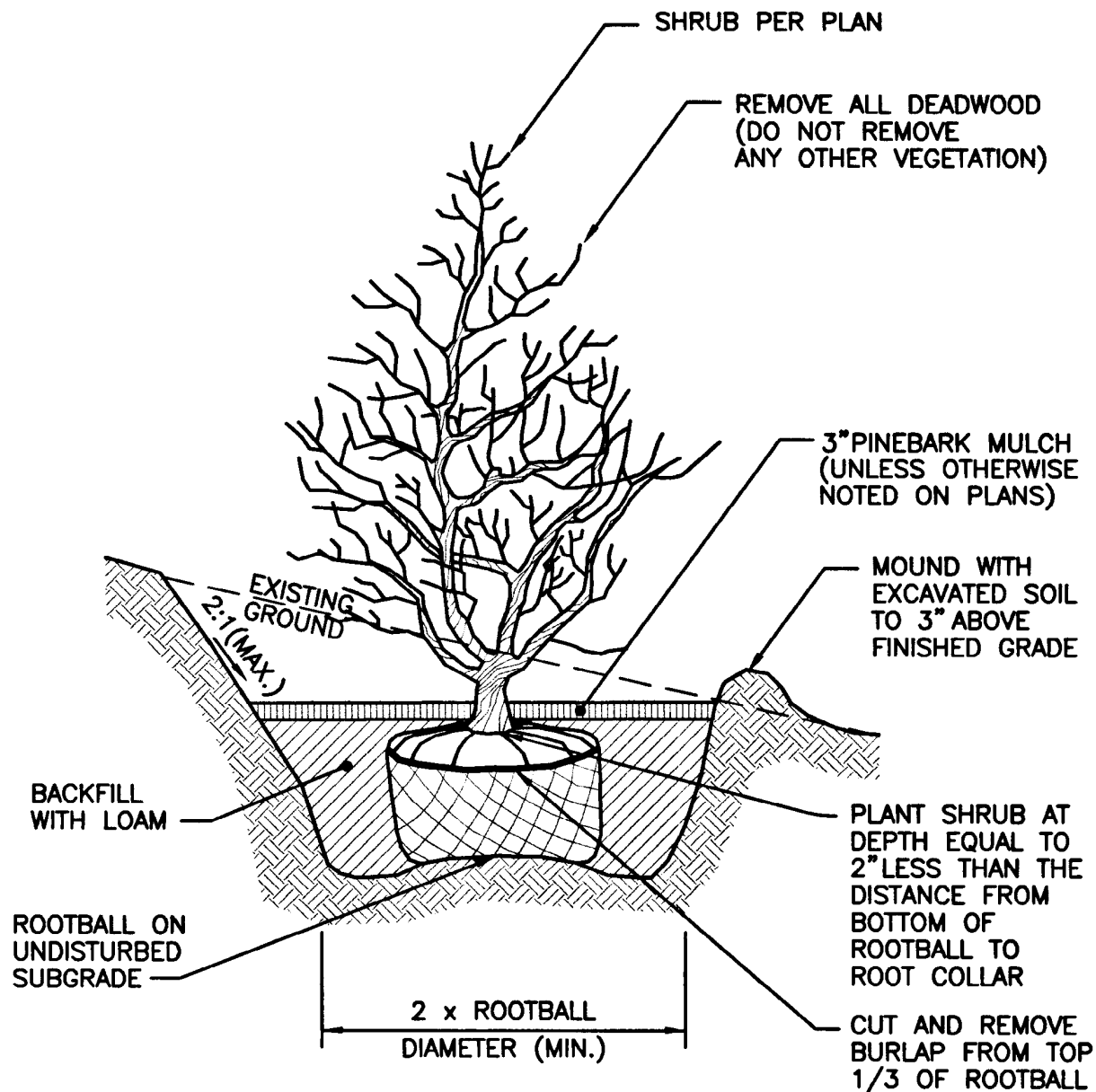
REVISIONS		
NO.	BY	DATE

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

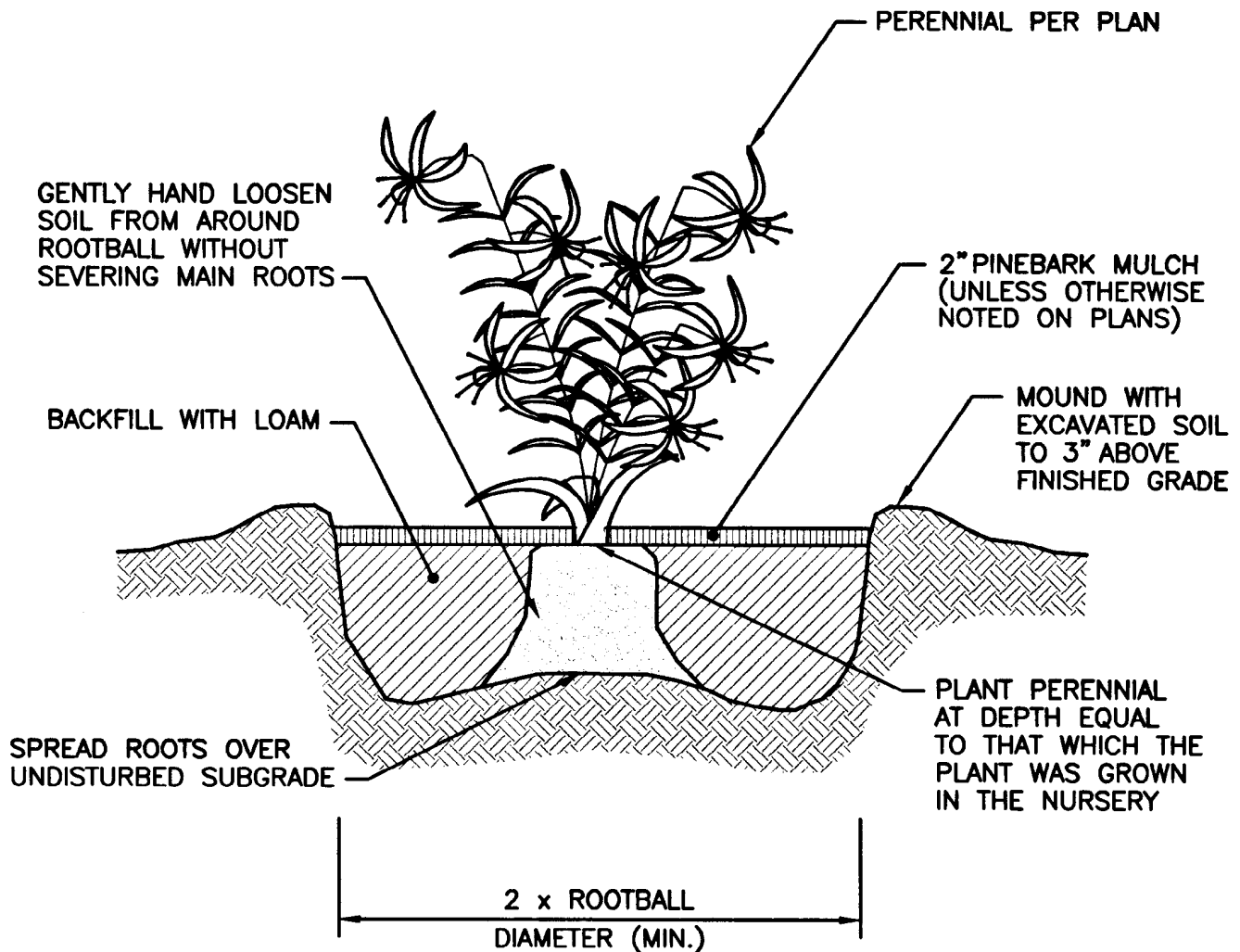
SHRUB PLANTING ON SLOPE

James A. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PERENNIAL PLANTING DETAIL

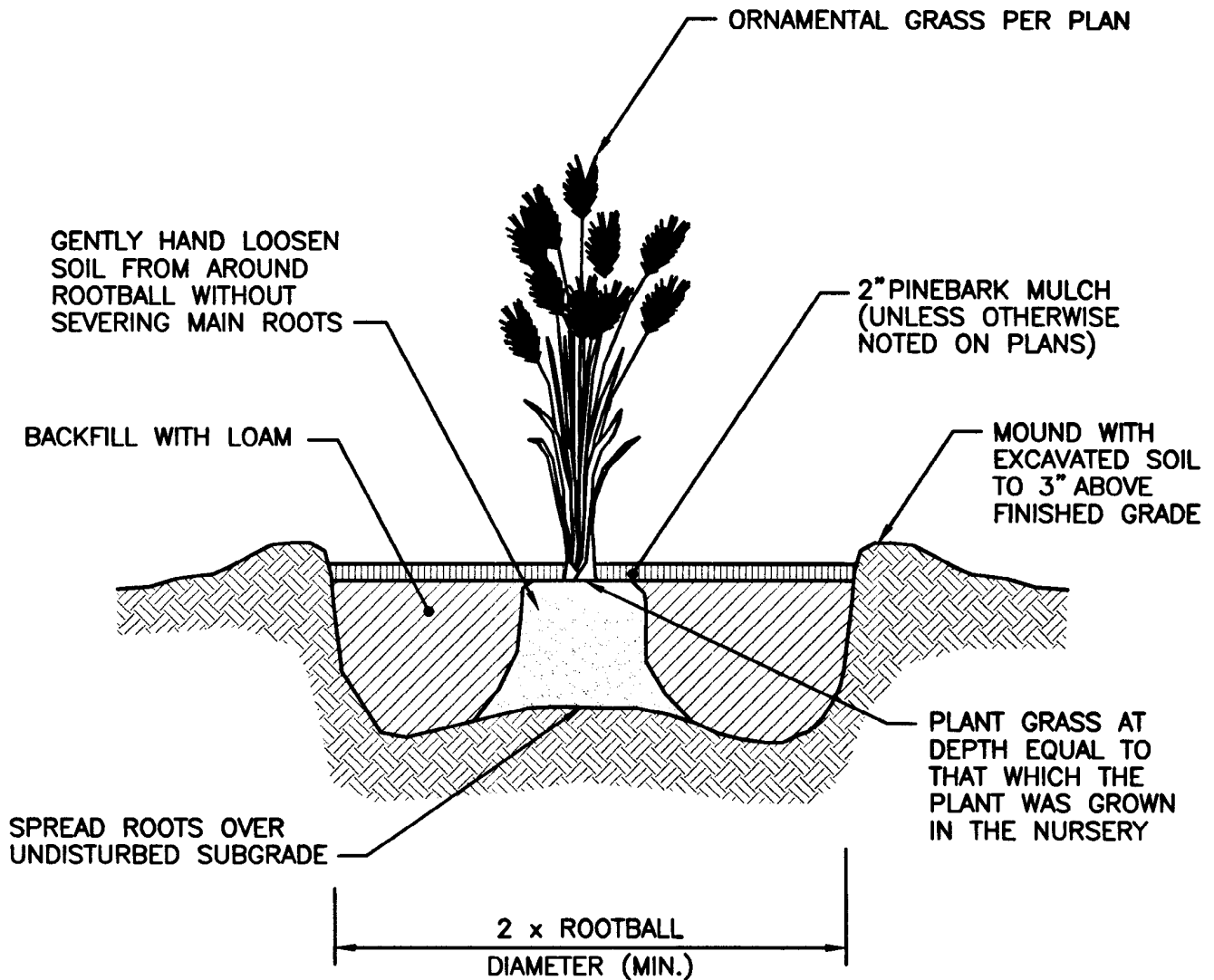
REVISIONS		
NO.	BY	DATE

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION



JUNE 15, 1998
ISSUE DATE

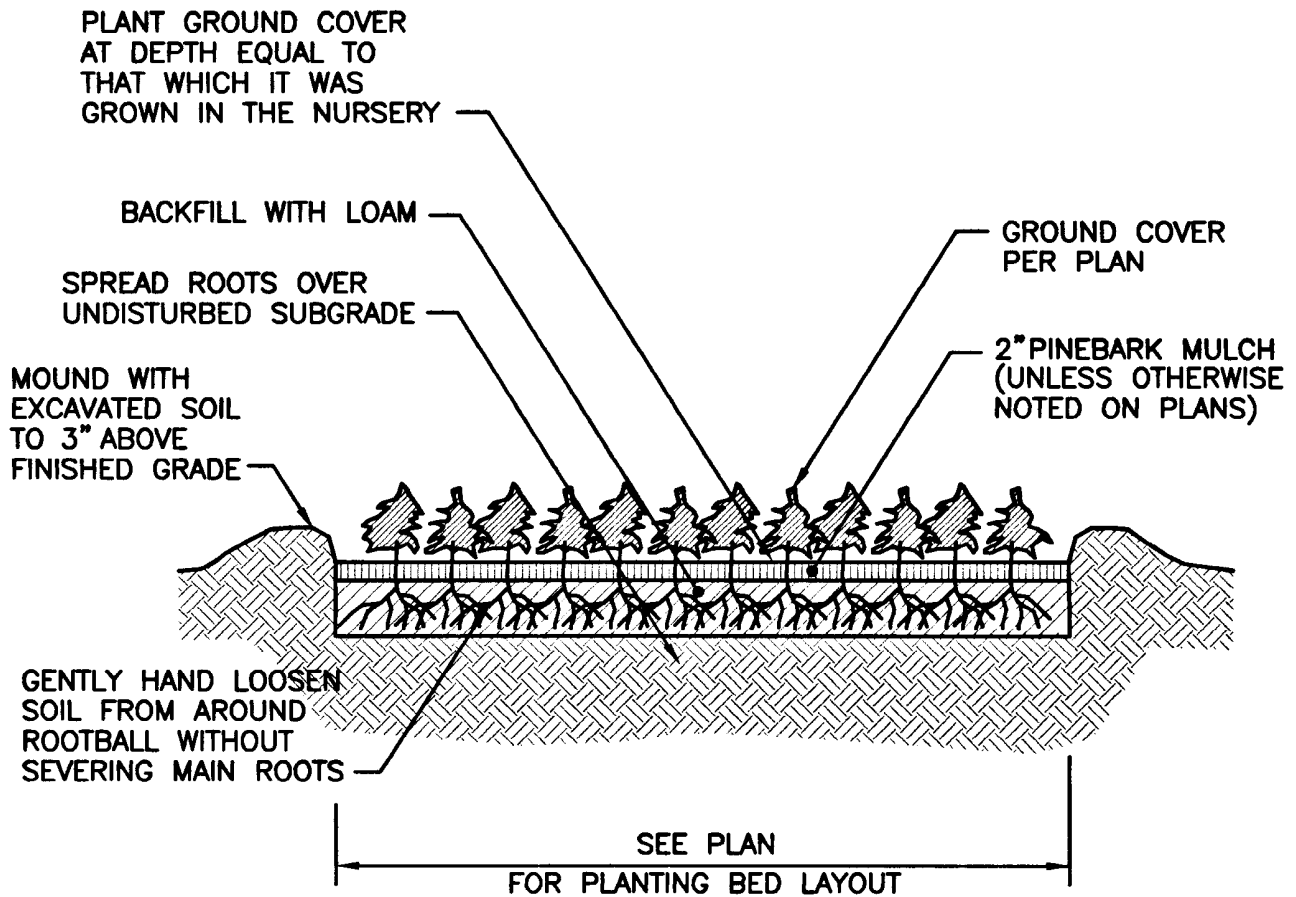




NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			ORNAMENTAL GRASS PLANTING DETAIL	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 50.5.0 </div>
NO.	BY	DATE		
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION
			JUNE 15, 1998 ISSUE DATE	



NOTE:

SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

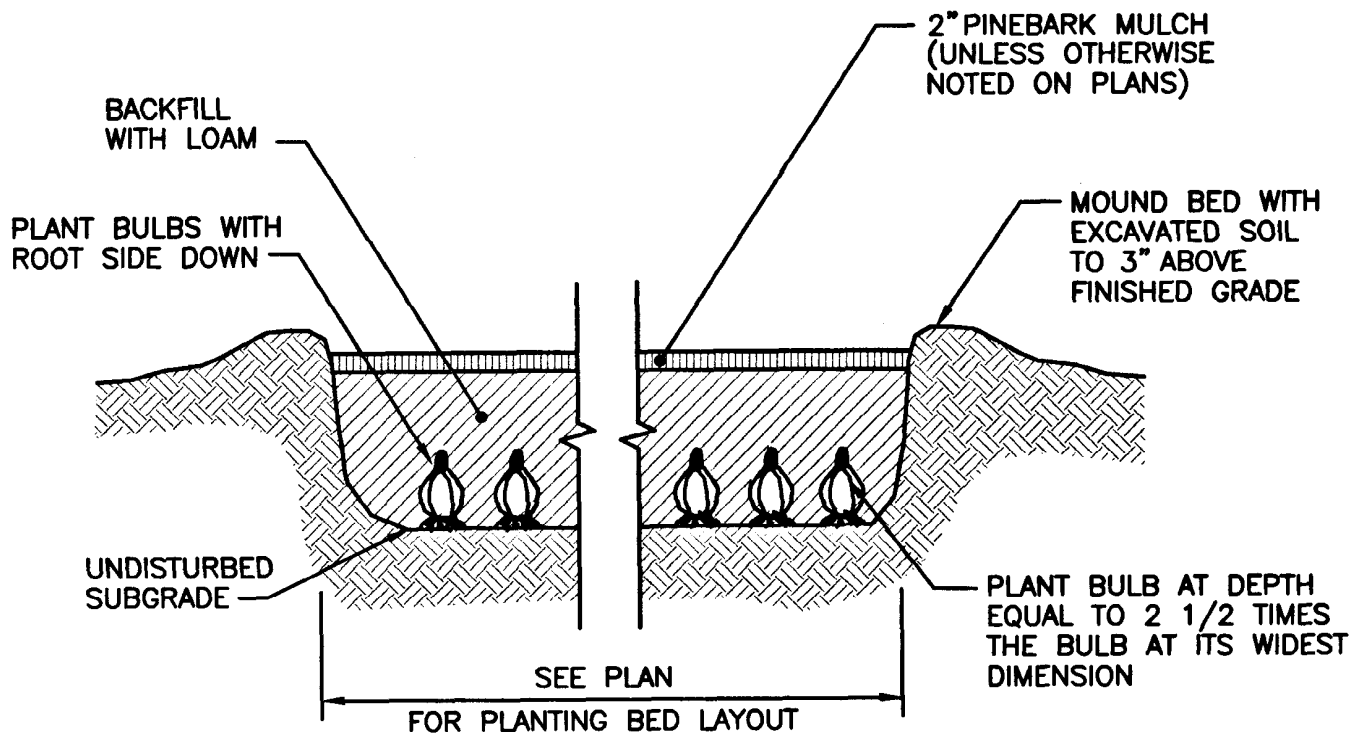
GROUND COVER PLANTING DETAIL

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE



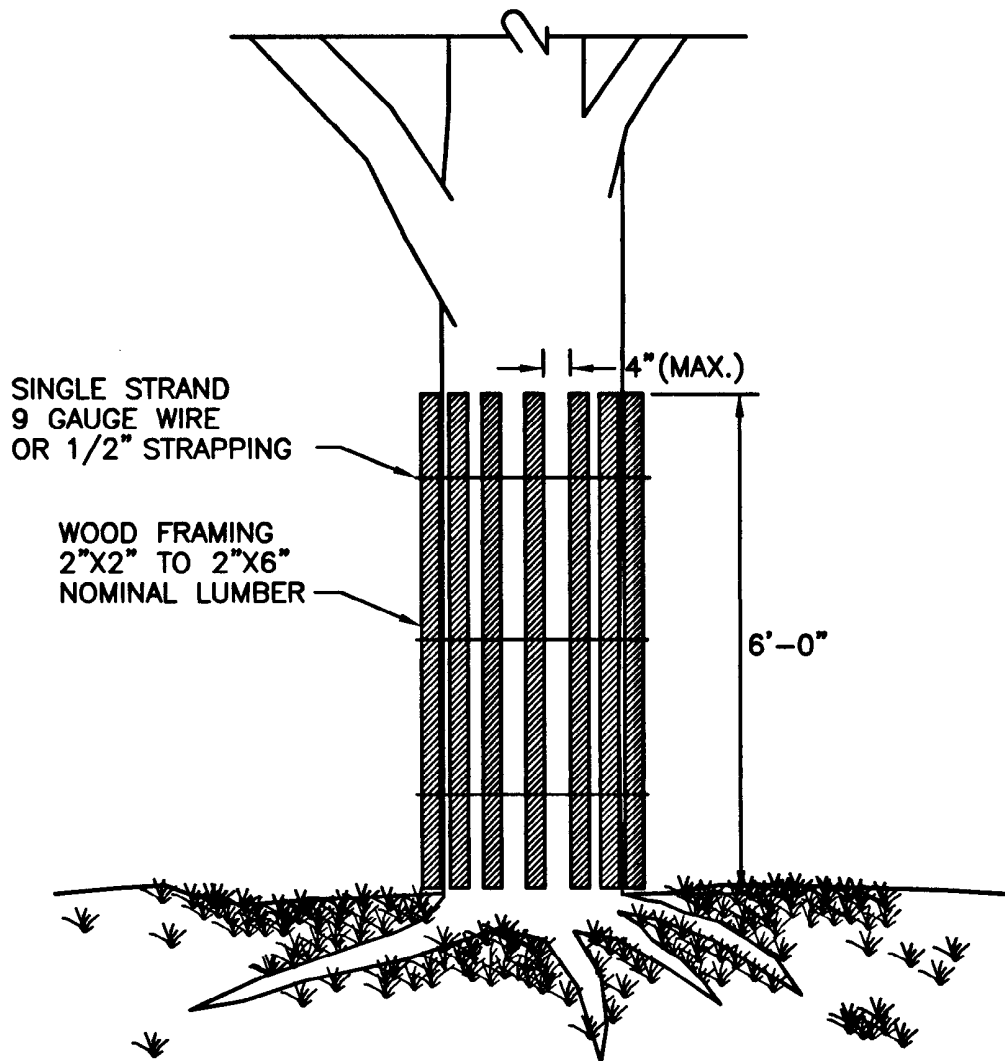


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
2. BY HAND, SPREAD BONE MEAL OVER ENTIRE PLANTING BED AT A RATE NOT TO EXCEED 1/2 LB. PER 25 SQ. FT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BULB PLANTING DETAIL	<div><div>R.I. STANDARD 50.7.0</div></div>
NO.	BY	DATE		



NOTE:

SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

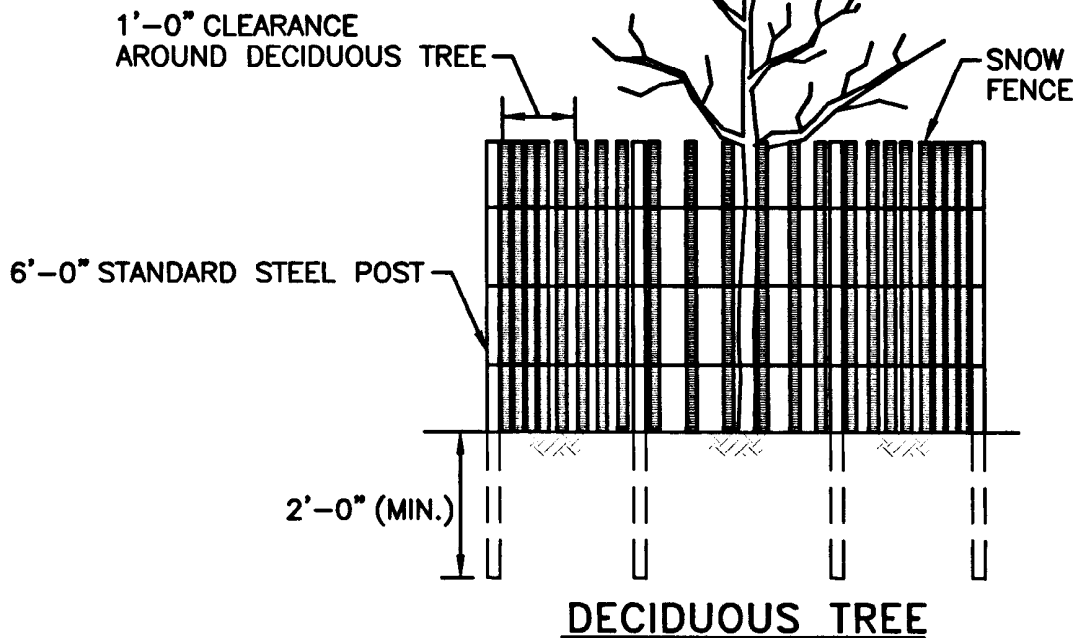
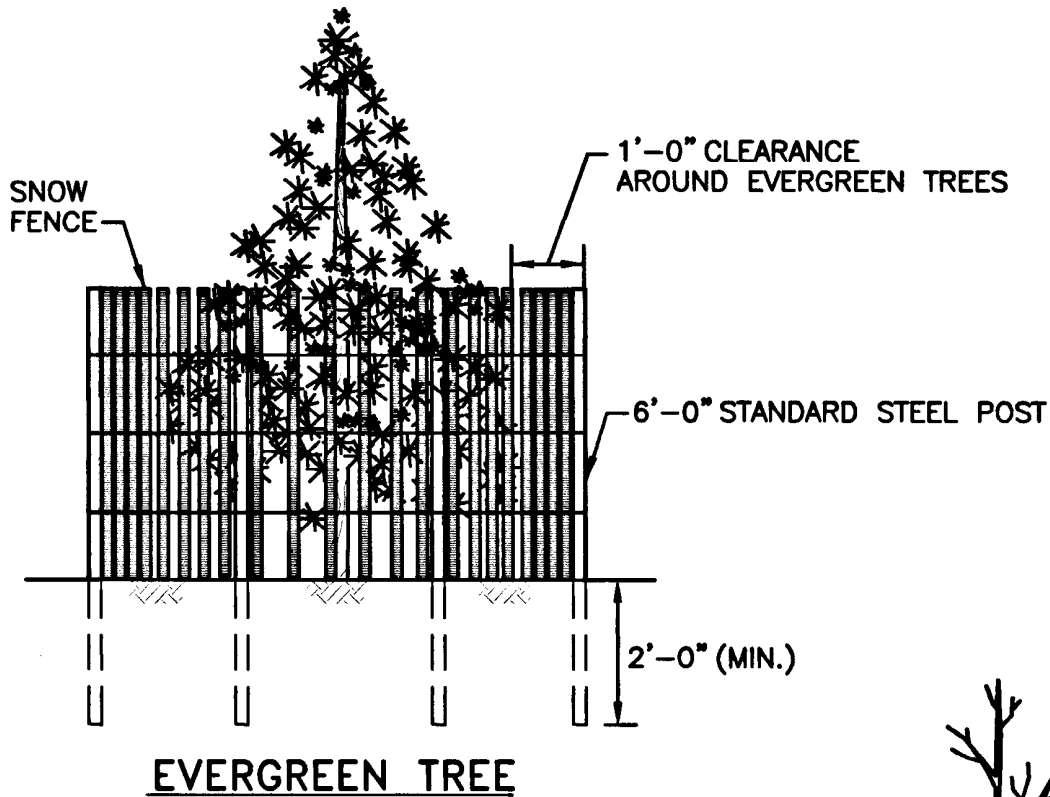
TREE PROTECTION DEVICE

James H. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

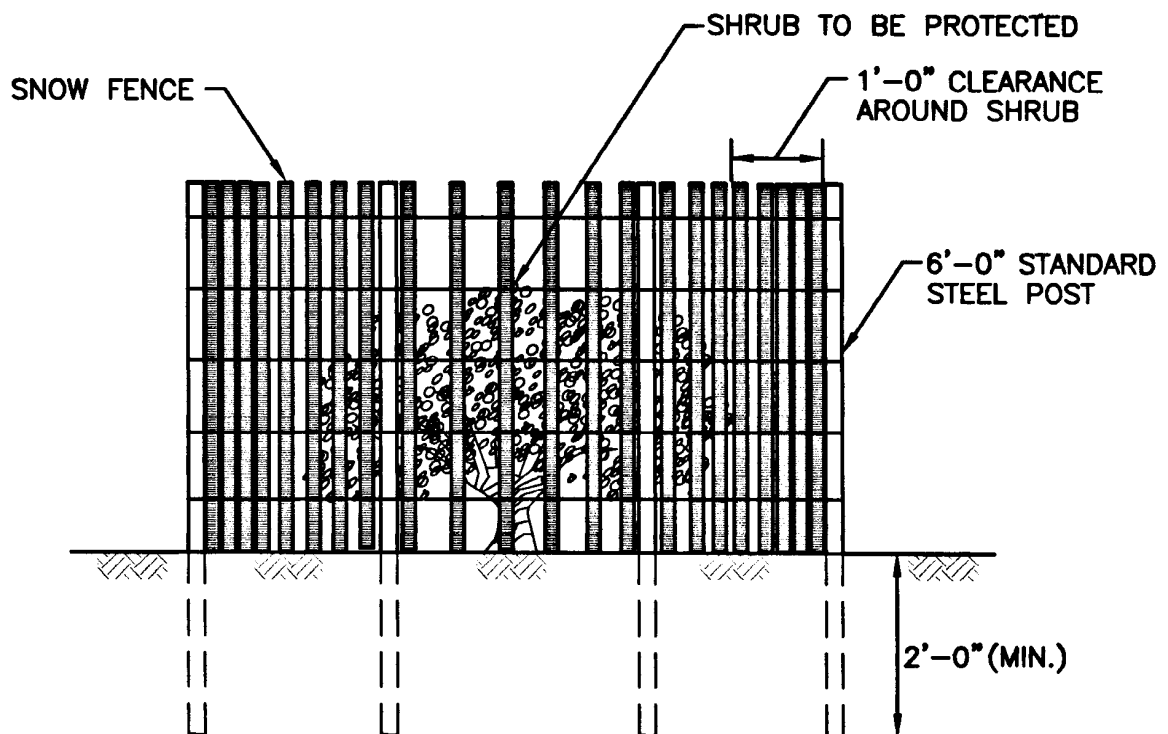
DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES

James A. Gagliardi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE





NOTE:
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

NO.	BY	DATE

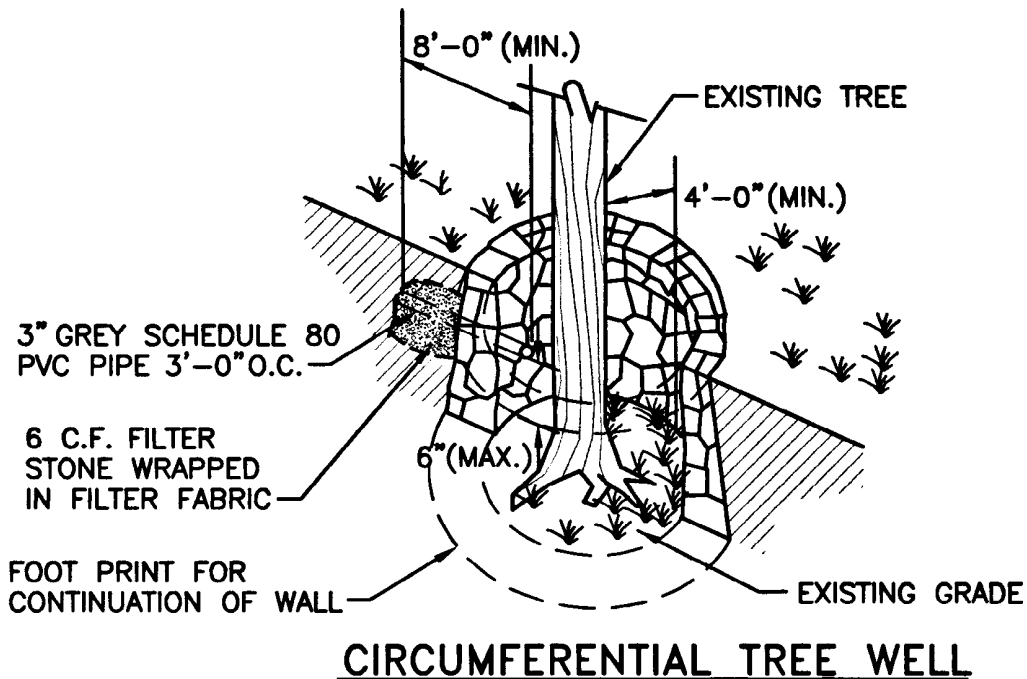
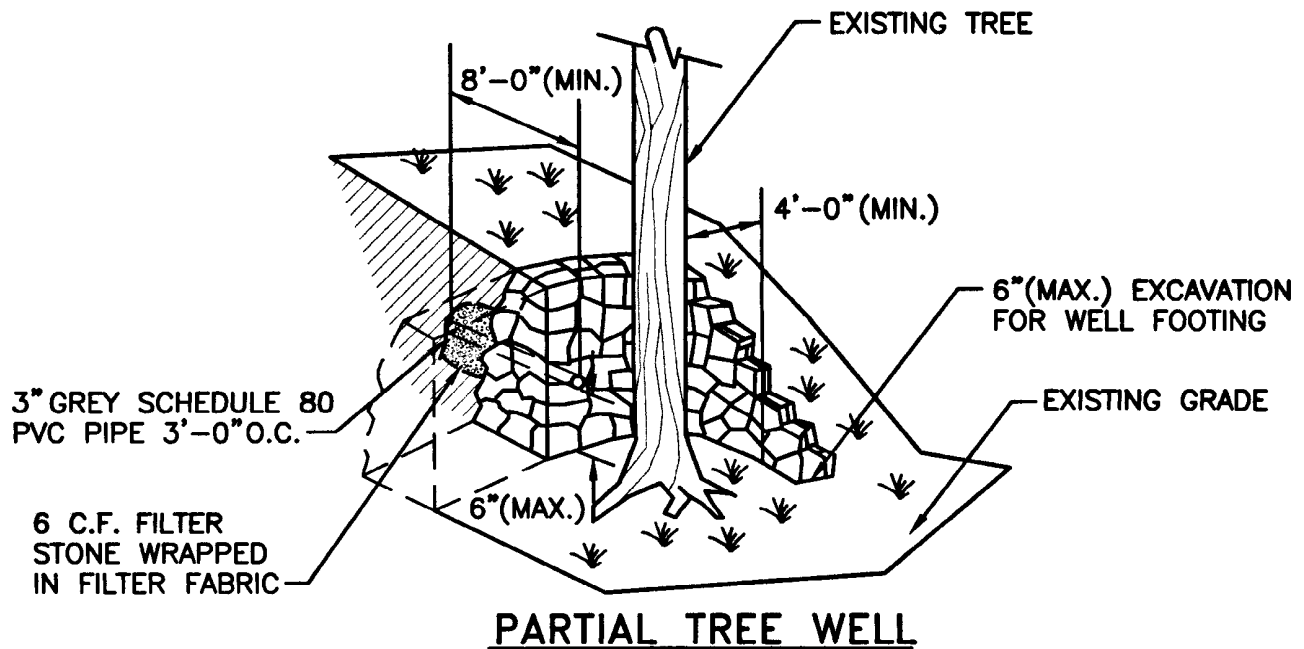
SHRUB PROTECTION DEVICE

James H. Gualdi
CHIEF ENGINEER
TRANSPORTATION

Edmund J. Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE

R.I.
STANDARD
51.2.0



NOTE:

SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

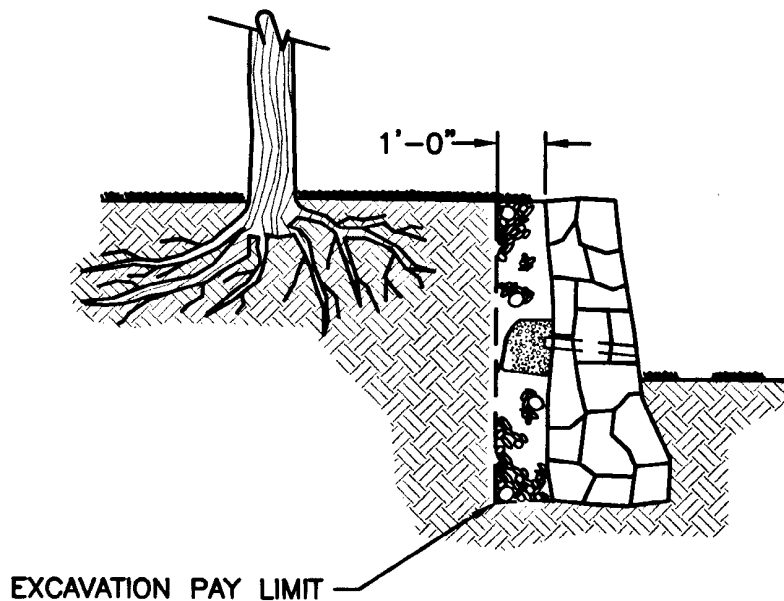
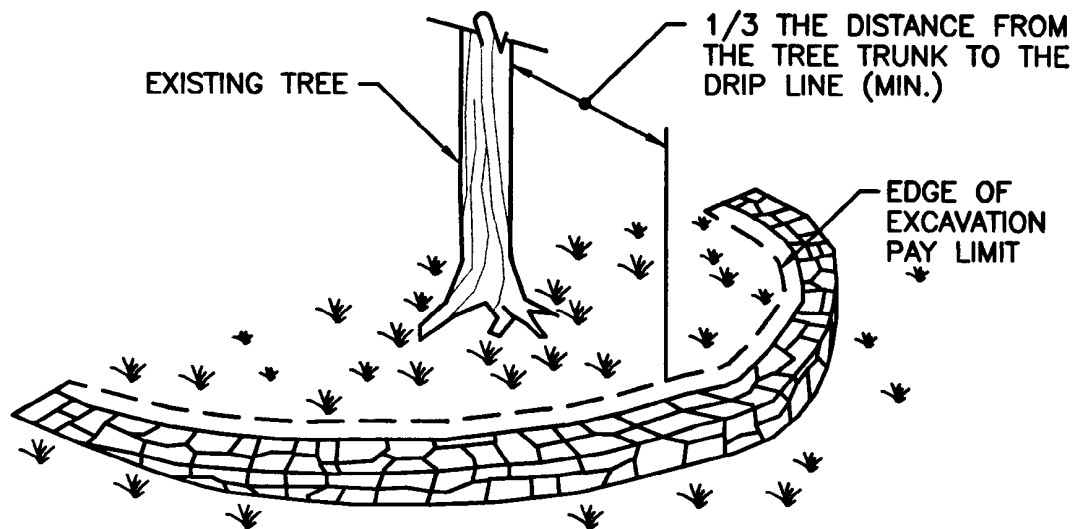
TREE WELL

James H. Capaldi
CHIEF ENGINEER
TRANSPORTATION

Edmund Parker Jr.
CHIEF DESIGN ENGINEER
TRANSPORTATION

JUNE 15, 1998
ISSUE DATE







SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR WALL INSTALLATION DETAILS REFERENCE STD. 10.0.1.
3. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL ROOT PRUNE THE TREE. ALL ROOT PRUNING SHALL BE IN ACCORDANCE WITH SECTION L.10 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TREE WALL	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 51.4.0 </div>
NO.	BY	DATE		
			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">  CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998 ISSUE DATE </div> </div>	